GSFC OPERATIONS CONTROL CENTER
GODDARD SPACE FLIGHT CENTER
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

VOLUME 6, NO. 6

MARCH 31, 1966

SATELLITE SITUATION REPORT

THE FOLLOWING REPORT REFLECTS DATA COMPUTED AND COMPILED. BY THE GODDARD SPACE FLIGHT CENTER, NORAD, AND THE SMITHSONIAN ASTROPHYSICAL OBSERVATORY AS OF 1200Z ON MARCH 31, 1966.

TRANSMITTING FREQ. (MC/S)																									
PER IGEE Km.		339 651 655	645		555	558	511		•	551	553			069	695	614	701	343	478	471	611	610	609	612	611
APOGEE Km.		1525 4316 3934	3827		3285	3654		<i>_</i> _ <i>i</i>		1073	1047		i	140	744	269	803	240	722	491	1060	1058	1041	1051	1049
INCLI- NATION		33,18 34,26 34,26	34.24		32.85	32,91	33,33	HELIOCENTRIC ORBIT	HELIOCENTRIC ORBIT	50,35	50,31		HELIOCENTRIC ORBIT	48.39	48,38	69.87	48.16	51,23	51,25	33.04	66.71	04.99	66.71	66.67	69°99
PER IOD MINUTES		103.7 138.4 134.0	132.7		125.5	129.7	129.8	HEL TOCEN	HELIOCEN	101.1	100.9		HEL IOCEN	99.1	99.2	97.9	6.66	93.4	7.96	94.3	101.6	101.6	101.4	101.5	101.5
LAUNCH		1 FEB 17 MAR						2 JAN		13 OCT	13 OCT		11 MAR	1 APR	1 APR	1 APR			13 APR		22 JUN	22 JUN		22 JUN	22 JUN
SOURCE		SN SN SN	s n		ns	SO	SN	USSR	Sn	Sn	Sn		Sn	Sn	SO	ns	Sn	ns	Sn	ns	SN	Sn	SN	Sn	Sn
CATALOGUE		004	1576		011	012	020	112	113	022	023		027	028	029	101	115	031	660	043	045	970	047	840	841
CODE NAME		EXPLORER 1 ROCKET BODY	V ANGUANU I		VANGUARD 2	ROCKET BODY	VANGUARD 3		PIONEER 4	EXPLORER 7	ROCKET BODY		PIONEER 5	ROCKET BODY	TIROS 1	NONE	NONE	TRANSIT 1B	NONE	MIDAS 2	TRANSIT 2A	GREB	ROCKET BODY		
OBJECT	1958 LAUNCHES	ALPHA 1 BETA 1		1959 LAUNCHES	ALPHA 1	ALPHA 2	ETA 1	MU 1	NU 1	IOTA 1	IOTA 2	1960 LAUNCHES	ALPHA 1	BETA 1	BETA 2	BETA 3	BETA 4	GAMMA 2	GAMMA 4	ZETA 1	ETA 1	ETA 2	ETA 3	ETA 4	ETA 5

TRANSMITTING FREQ. (MC/S)														***											\$54\$324\$150\$400				
PER IGEE Km.		896	1503	1514	LAINED	1538	796	925	416	416	395	419	619	616	618	620		<i>L</i> 97	797		635	TAINED	,	486	880	876	•	737	743
APOGEE Km.		1757	1684	1689	NOT MAINTAINED	1682	1211	1206	2241	2193	1915	2034	7.28	717	720	732		540	534		2591	NOT MAIN		1771	1000	1005		818	804
INCLI- NATION		47.34	47.22	47.25	ELEMENTS	47,34	28.32	28.24	49.95	49.93	49.45	50.50	48.51	48.52	48.52	48.52		97.37	97,38	HELIOCENTRIC ORBIT	38.85	CURRENT ELEMENTS NOT MAINTAINED	POSITION UNCERTAIN	28.79	66.81	78.99		7.30	74.90
PERIOD MINUTES		113.0	118,1	118.2	CURRENT	118.4	107.0	1.36.6	112.2	1111,7	108,5	110.0	98.2	98.1	98.1	98,3		7.46	9,46	HEL IOCEN	118.5	CURRENT	POSITION	107.9	103.8	103.8		100.4	100.3
LAUNCH		12 AUG	12 AUG				4 OCT		3 NOV				23 NOV	23 NOV	23 NOV	23 NOV		31 JAN		12 FEB			25 MAR		29 JUN	29 JUN		•	12 JUL
SOURCE		ns	ns	Sn	ns	ns.	ns	Sn	ns	Sn	ns	Sn	Sn	ns	Sn	Sn		nS	SD	USSR	SO	SD	CS.	ns	ns	ns	ns	ns	ΩS
CATALOGUE NUMBER		049	050	051	052	053	058	059	090	062	690	105	063	064	074	075		070	6 4 0	080	082	085	860	107	116	117		162	165
CODE NAME	(d'INC	ECHO I	ROCKET BODY	METAL OBJECT	METAL OBJECT		COURIER 1B	ROCKET BODY	EXPLORER 8	ROCKET BODY	NONE	NONE	TIROS 2	ROCKET BODY	NONE	NONE		SAMOS 2	METAL OBJECT	VENUS PROBE	ROCKET BODY	NONE	EXPLORER 10	EXPLORER 11	TRANSIT 4A	INJUN-SR-3	METAL OBJECTS	TIROS 3	ROCKET BODY
OBJECT	1960 LAUNCHES (CONT'D)	IOTA 1				IOTA 5		NO 2		XI 2			DI 1		PI 3		1961 LAUNCHES	ALPHA 1	ALPHA 2	GAMMA 1	DELTA 2	DELTA 3	KAPPA 1	NU 1	OMICRON 1	OMICRON 2	OMICRON 3-212**	RHO 1	RHO 2

TRANSMITTING FREQ. (MC/S)					5 T + 17												7						77. T					136,405	
PER IGEE Km.		614	3346	3322	3353	AINED	3502	3481	3483	3502	951	876	948					712	702	703	710	554	544	2785	2795	2800		388	387
APOGEE Km.		791	3545	3542	3571	NOT MAINTAINED	3751	3740	3804	3731	1108	1113	1098		ŧ-	4 E		839	945	762	834	579	582	3412	3371	3426	H	1160	1145
INCLI- NATION		47.93	91,25	91.22		70	95.86	95.85	95.87	95.82	32,43	32,42	32,43		TREC OFFT	TIC OUT	TRIC ORBI	48.31	48.13	48.42	48.31	32,83	32,83	86.65	86.65	86,65	HELIOCENTRIC ORBIT	53,86	53,86
PER IOD MINUTES		98.8	161.5	161.1		Į	166.0	165.6	166,4	165.7	105.8	105.8	105.6		O TOTANGO OF 1911	HELIOCEN	HELIOCENIKIC	100.4	101.4	99.5	100.3	0.96	0.96	153.0	152.6	153,3	HELIOCEN	100,3	100,2
LAUNCH		12 JUL 12 JUL	-		12 JUL				21 OCT	21 OCT	15 NOV	15 NOV	15 NOV		NA 1 AC	N C 0 2		8 FEB	8 FEB	8 FEB	8 FEB	7 MAR	7 MAR				23 APR		26 APR
SOURCE		Sn Sl	Sn	ns	Sn	SN	ns	n s	ns	ns	ns	SD	Sn		110	n (S C C	Sn	ns	ns	ns	Sn	ns	ns	ns	nS	ns	US/UK	n s
CATALOGUE NUMBER		166 167	163	188	196	170	192	194	195	2009	202	205	204		221	177	777	226	227	228	229	255	257	27.1	273	274	282	285	288
CODE NAME	(CONT'D)	METAL OBJECT		METAL OBJECT	METAL OBJECT	EXPLORER 12	MIDAS 4	METAL OBJECT	METAL OBJECT		TRANSIT 4B	TRAAC	ROCKET BODY		PANCED 3	MANGER O	KUCKET BODY	TIROS 4	ROCKET BODY	METAL OBJECT	METAL OBJECT	ORB. SOL. OBS. 1	ROCKET BODY				ROCKET BODY	ARIEL	ROCKET BODY
OBJECT	1961 LAUNCHES (CONT'D)	RHO 3	SIGMA 1	SIGMA 3	SIGMA 4	UPSILON 1	A DELTA 1	A DELTA 3	A DELTA 4	A DELTA S	A ETA 1	A ETA 2	A ETA 3	1962 LAUNCHES	AT DHA 1	ALFILA I	ALFHA 2	BETA 1	BETA 2	BETA 3	BETA 4	ZETA 1	ZETA 2	KAPPA 1	KAPPA 3	KAPPA 4	MU 2		OMICRON 2

\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	19 JUN 19 JUN 19 JUN 19 JUN 10 JUL 10 JUL 23 AUG 23 AUG	100.5 58. 100.4 58. 101.7 58. 99.1 57. 157.6 44. 99.5 98.2 98.2 100.8 98.2 HELIOCENTRIC HELIOCENTRIC	100.5 58.13 100.4 58.12 101.7 58.21 99.1 57.99 157.6 44.81 157.6 44.79 99.5 98.69 99.5 98.69 HELLIOCENTRIC ORBIT 98.7 58.30	971 963 1080 858 5645 5634 743 772 854	591 589 602 572 943 940 618 605	
\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$		100.5 100.4 101.7 99.1 157.8 157.6 99.5 99.5 HELIOCEN HELIOCEN	58.13 58.12 58.21 57.99 44.81 44.79 98.60 98.60 98.60 98.60	- N.N.	591 589 602 572 940 618 605 621	
\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$		100.4 101.7 99.1 157.8 157.6 99.5 98.2 100.8 99.5 HELIOCEN HELIOCEN	58.12 58.21 57.99 44.81 44.79 98.69 98.60 98.78 98.78 1RIC ORBI	- N.N.	589 602 572 943 940 618 605 621	
\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$		101.7 99.1 157.8 157.6 99.5 98.2 100.8 99.5 HELIOCEN HELIOCEN	58.21 57.99 44.81 44.79 98.69 98.78 98.78 98.78 1RIC ORBIT	- nn	602 572 943 940 618 621 618	
\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$		99.1 157.8 157.6 99.5 98.2 100.8 99.5 HELIOCEN HELIOCEN	57.99 44.81 44.79 98.69 98.78 98.69 TRIC ORBIT	יט יט	572 943 940 618 605 621 618	
\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$		157.8 157.6 99.5 98.2 100.8 99.5 HELIOCEN 98.7	44.81 44.79 98.69 98.60 98.78 98.69 TRIC ORBI	ע ע	943 940 618 605 621 618	
\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$	=	157.6 99.5 98.2 100.8 99.5 HELIOCEN HELIOCEN	44,79 98,69 98,60 98,78 98,69 TRIC ORBIT	Ŋ	940 618 605 621 618	
\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$		99.5 98.2 100.8 99.5 HELIOCEN HELIOCEN	98.69 98.60 98.78 98.69 TRIC ORBIT		618 605 621 618	
\$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$0 \$		98.2 100.8 99.5 HELIOCEN HELIOCEN 98.7	98.60 98.78 98.69 TRIC ORBIT		605 621 618	
0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5 0.5		100.8 99.5 HELIOCEN HELIOCEN 98.7	98.78 98.69 TRIC ORBIT		621 618	
sn sn		99.5 HELIOCEN HELIOCEN 98.7	98.69 TRIC ORBIT TRIC ORBIT		618	
sn sn		HELIOCEN HELIOCEN 98.7	TRIC ORBIT		(
sn ns		HELIOCEN 98.7			0	
SN		98.7	58 30	706		
			00.00	00/	069	
NS 0.8		98.6	58,30	701	688	
ns	18 SEP	7.66	58.45	775	683	
Sn	18 SEP	0.86	58.21	693	635	
CANADA	29 SEP	105.5	80.48	1034	1002	\$136.591\$136.078
SA	29 SEP	105.4	80.47	1028	1003	
SN	29 SEP	105.4	80.51	1024	1001	
us	29 SEP	105.5		1051	985	
Sn	2 OCT	CURRENT	CURRENT ELEMENTS !	NOT MAINTAINED	AINED	
SN	2 OCT	CURRENT	CURRENT ELEMENTS NOT	NOT MAINTAINED	AINED	
S.O	18 OCT	HEL10CEN	HELIOCENTRIC ORBIT	T		
nS	18 OCT	HEL.IOCEN	HELIOCENTRIC ORBIT			
Sn	26 OCT	120.6	71.35	3194	199	
S.O.	27 OCT	CURRENT	ELEMENTS 1	NOT MAINT	AINED	
SO	27 OCT	INSUFFIC	IENT OBSE	RVATIONS		
Sa	31 OCT	107.9	50,13	1183	1076	\$162\$324
ns	31 OCT	107.6	50,21		1072	
USSR	NOV 1	HELIOCEN	TRIC ORBI	₽		
	US US US USSR	27 27 31 31	27 OCT 27 OCT 31 OCT 1 NOV	27 OCT 27 OCT 31 OCT 1 NOV	27 OCT 27 OCT 31 OCT 1 NOV	27 OCT CURRENT ELEMENTS NOT MAINTAIN 27 OCT INSUFFICIENT OBSERVATIONS 31 OCT 107.6 50.13 1161 1 NOV HELIOCENTRIC ORBIT

TRANSMITTING FREQ. (MC/S)						\$136,140;136,621																							13.4	
PERIGEE Km.		222	236	224	235	1320	1318	754	869	572	694	701		457	AINED	AINED	005	000	503	472	522		242	972	277	3595	3109	3595	CAINED	3609
APOGEE Km.		1474	2138	1455	2015	7438	7423	1175	732	716	735	834		519	NOT MAINTAINED	NOT MAINTAINED	707	181	793	735			572	10801	10779	3696	4181	3696	NOT MAINTAINED	3654
INCLI- NATION		70.31	70,35	70.28	70.27	47.47	47.51	52.05	90.65	90.74	90.65	90.46		81,89	Ī		100 40	100.40	100.46	100,48	100,47	TRIC ORBIT	57.60	42.76	42,78	87,53	87.32	87.34	ELEMENTS	87.34
PER TOD MINUTES		102,1	109.2	101.9	107.9	185.1	184.8	104.4	99.1	97.6	0.66	100.2		94.3	CHREENT	CHREENT	20 CONNEW 1	9.16	7.76	7.96	98.3	BARYCEN	92.8	225.3	225.1	166.4	166.4	166.4	CURRENT	166,1
LAUNCH		13 DEC	13 DEC			13 DEC				19 DEC		19 DEC		16 JAN							19 FEB	2 APR	3 APR	7 MAY	7 MAY	9 MAY			9 MAY	
SOURCE		ns	US	SO	SN	SD	ns	ns	ns	ns	ns	Sn		ns	110	בי מ	S :	SO	ns	SN	NS	USSR	ns	ns	ns	ns	ns	ns	ns	ns
CATALOGUE NUMBER		502	504	513	520	503	515	506	509	514	519	523		527	. ני	1, C. R.	200	533	534	535	536	266	564	573	575	574	579	809	589	602
CODE NAME	CONT'D)		INJUN 3			RELAY 1	ROCKET BODY	EXPLORER 16	TRANSIT 5A						1 MODING	DOCKET BODY	NUCKET BUDI						EXPLORER 17	TELSTAR 2	ROCKET BODY					
OBJECT	1962 LAUNCHES (CONT'D)	B TAU 1	B TAU 2		B TAU 6		B UPSILON 2						1963 LAUNCHES	1963 034		1963 04A		1963 05A	1963 05B	1963 05C		1963 08B			_ C	. ~				1963 14E

OBJECT	CODE NAME	CATALOGUE	SOURCE	LAUNCH	PER IOD MINUTES	INCLI- NATION	APOGEE Km.	PER IGEE Km.	TRANSMITTING FREQ. (MC/S)
1963 LAUNCHES	S (CONT'D)								
1963 14F		628	ns	9 MAY	166.8	87.32	3662	3660	
1963 146		629	ns	9 MAY	166,4	87,34	3712	3578	
1963 14H		702	ns	9 MAY	166.4	87,33	3681	3609	
1963 22A		594	SN	16 JUN	7.66	90.01	756	734	\$150\$400
		603	SN	16 JUN	7.66	90.00	750	739	
1963 22C		610	ns	16 JUN	101.2	90.21	891	742	
1963 22D		611	ns	16 JUN	98.1	89,83	997	568	
	TIROS 7	604	SN	NUL 61	97.4	58.22	645	626	\$136.233\$136.924
	RUCKET BODY	609	ns	19 JUN	97.3	58.22	641	620	
1963 24C	METAL OBJECT	909	· sn	19 JUN	97.9	58.39	672	641	
1963 24D	METAL OBJECT	607	ns	NO C 61	6.96	58,11	633	584	
1963 25B		614	ns	27 JUN	132.0	82.13	4079	340	
1963 26A	RESEARCH	612	ns		102.0	49.75	1287	416	
:	SATELLITE FOR								
1963 27A		613	SII	NIII. 95	97.6	82, 33	520	481	
		622	SII		167.8	88.52	3740	3665	
		635	Sil		167.8	88.97	37.35	3669	
1963 30C		630	SO	18 JUL	167.5	88.44	3724	3652	
		624	ns		167.4	87.88	4605	2762	
1963 30E		631	ns	œ	168,3	88,44	3787	3652	
1963 31A	SYNCOM 2	634	ns	9	1434.9	31,23	35803	35722	\$136,467\$136,980
									\$1814.069
									\$1820,177
1963 31B	ROCKET BODY	625	Sn	26 JUL	LZ	ELEMENTS	NOT MAINTAINED	AINED	
1963 38A		699	ns	28 SEP	107.1	89,90	1110	1077	
1963 38B		029	ns	28 SEP	107.4	89,90	1138	1074	
		671	ns		•	89.90	1135	1075	\$136,653\$162\$324
1963 38D		672	Sn	28 SEP	107.3	89,95	1141	1067	

OBJECT	CODE NAME	CATALOGUE	SOURCE	LAUNCH	PER IOD MINUTES	INCLI- NATION	APOGEE Km.	PER IGEE Km.	TRANSMITTING FREQ. (MC/S)
1963 LAUNCHES (CONT'D	(CONT'D)								
1963 38E		745	ns	28 SEP	107.1	86.68	1108	1076	
		2097	ns		107.3	89.93	1124	1084	
		674	ns	17 OCT	6490.7	37.80	117349	100421	
		675	ns	17 OCT	N	ELEMENTS	NOT MAINTAINED	CAINED	
1963 39C		692	ns	17 OCT	6509.4	36.57	115176	103035	
	POLYOT 1	683	USSR	1 NOV	102.2	58.94	1379	346	
		684	USSR	1 NOV	8.76	58.60	963	321	
		989	USSR	1 NOV	97.2	59.80	912	325	
	EXPLORER 18	, 693	ns	27 NOV	CURRENT	ELEMENTS	NOT MAINTAINED	CAINED	
	CENTAUR 2	769	ns	27 NOV	107.8	30,36	1769	478	
		969	ns	27 NOV	107.2	30.06	1618	574	# ⁽¹)
m		269	ns	27 NOV	107.4	30.06	1636	575	
		869	ns	27 NOV	108.0	29,90	1658	610	
1963 47E		669	ns	27 NOV	108.6	30.44	1748	571	
1963 47F		700	ns	27 NOV	108.6	30,46	1751	573	
1963 47G		701	SN	27 NOV	107.8	30.00	1646	602	
1963 47H		739	Sn	27 NOV	105.9	30.41	1582	487	
1963 473		1994	SO	27 NOV	108.8	30,52	1764	574	
1963 49A		703	Sn	5 DEC	106.8	89.95	1089	1071	
1963 49B		704	ns	5 DEC	107.1	89.95	1124	1066	\$150\$400
1963 490		705	ns	5 DEC	107.1	89.94	1121	1067	
1963 49D		902	ns	5 DEC	107.1	89.96	1117	1066	
1963 49 E		715	Sn	5 DEC	1.701	89.95	1122	1064	
1963 49F		753	Sn	5 DEC	107.1	89.97	1121	1068	
1963 53A	EXPLORER 19	714	ns	19 DEC	115.0	78.67	2264	650	
1963 53B		721	ns	19 DEC	115.8	78.60	2394	965	
1963 53C		722	ns	19 DEC	115.8	78.61	2377	61 0	
1963 53D		723	SN	19 DEC	115.8	78.63	2380	611	
1963 53E		724	ns	19 DEC	115.9	78.63	2381	612	
1963 53F		725	ns	19 DEC	115.7	78.61	2365	616	
1963 536		726	ns	19 DEC	115.8	78.60	2385	265	

TRANSMITTING FREQ. (MC/S)					\$150\$400																	\$136.470\$136.980	\$1820.177 \$1815 794	\$1814.931				\$136,326\$136,350	\$136.680		
PERIGEE Km.		366		265	860	903	785	856	829	833	828	466	403	1228	411	1243	102729	90461	FAINED		272	35759			LAINED	899	606	867	8,48	878) -)
APOGEE Km.		1422		330	951	981	951	954	840	837	840	522	7017	65487	7029	66674	103902	115626	NOT MAINTAINED		3623	35783			8	39318	39441	1023	1015	969	?
INCLI- NATION			NTRIC ORBIT	58.03	90.52	90.22	98.06	90.52	99.73	99.77	08.66	82.08	60.98	59.94	06.09	50.02	38.68	40.56	ELEY	TRIC ORBIT	95.65	.72			ELEMENTS	66.99	67.15	79.91	70 00	79.82	10.01
PER IOD MINUTES		102.9	HELIOCENTRIC	9.06	103.1	103.8	102.3	103.1	101.6	101.6	101.6	94.8	168.1	1313.8	168.3	1341.2	6026.0	6003.7	CURRENT	BARYCENTRIC	126.0	1435.3			CURRENT	714.9	717.6	103.9	103 p	103 1	7.001
LAUNCH		27 MAR	2 APR	12 APR	4 JUN	4 JUN	VOC 7	VOC 7			18 JUN	2 JUL	_	10 JUL		-	•	17 JUL	17 JUL	28 JUL	14 AUG	19 AUG			19 AUG	22 AUG	22 AUG	25 AUG	0.11A 3.0	25 AUG	
SOURCE		ns	USSR	USSR	Ω S	SN	US	ns	Sn	SN	ns	us	USSR	USSR	USSR	USSR	us	ns	SD	ns	SD	ns			ns	USSR	USSR	ns	11 11 12	00 01	Š
CATALOGUE NUMBER		847	785	784	801	805	806	809	812	813	815	824	829	830	831	832	836	837	838	843	851	858			862	869	868	870	0	0 / 1	0/0
CODE NAME	S (CONT'D)			POLYOT 2									ELECKTRON 3	ELECKTRON 4								SYNCOM 3				COSMOS 41		EXPLORER 20			
OBJECT	1964 LAUNCHES (CONT'D)	1964 15C	1964 16D	1964 19B	1964 26A	1964 26B		1964 26D	1964 31A			1964 35A	1964 38A					1964 40B	1964 40C	1964 41B	1964 45B				1964 47B						1964 5.IC

TRANSMITTING FREQ. (MC/S)			\$136.200\$400.250 \$400.850 136.147	\$136.171\$162\$324 \$20\$40\$41\$360	\$136.078\$136.861 136.709 \$136.292\$136.860
TRANSN FREQ.		,	\$136.200 \$400.850 136.147	\$136. \$20\$4	\$136.078 136.709 \$136.292
PERIGEE Km.		825 795 429 430 606 671	917 1035 1054 1067 1062	1046 890 888 840 909 507 445 445	462 591 534 537 526
APOGEE Km.		1000 1032 923 925 866 808	144824 94288 1080 1086 1076 1079	ee ee	976 2363 2489 2489 2503
INCLI- NATION		79.82 79.81 98.69 98.70 65.10	40.72 33.72 89.91 89.92 89.90 89.90	89.94 79.70 79.72 79.33 80.05 82.05 82.04 82.04	51.95 81.44 81.38 81.36 81.36
PER 10D MINUTES		103.2 103.2 98.2 98.3 99.5	3841.9 2080.3 106.6 106.6 106.6 106.6	r >	99.2 115.4 116.2 116.2 116.3
LAUNCH		25 AUG 25 AUG 28 AUG 28 AUG 28 AUG 28 AUG	5 SEP 6 OCT 6 OCT 6 OCT 6 OCT		6 NOV 21 NOV 21 NOV 21 NOV 21 NOV
SOURCE		US US US USSR USSR	sn sn sn sn sn sn sn sn	sn sn sn sn sn sn sn sn	sn sn sn
CATALOGUE NUMBER		874 875 872 878 876 877	879 889 893 897 900 901	903 899 976 977 922 925 927	924 931 932 934
CODE NAME	s (cont'd)	NIMBUS 1 COSMOS 44	OGO 1 EXPLORER 21	EXPLORER 22 MARINER 3	EXPLORER 23 EXPLORER 24 EXPLORER 25
OBJECT	1964 LAUNCHES (CONT'D)	496 496 496 496 496 496 496			1964 74A 1964 76A 1964 76B 1964 76C 1964 76D

OBJECT	ICT.	CODE NAME	CATALOGUE	SOURCE	LAUNCH	PER IOD MINUTES	INCLI- NATION	APOGEE Km.	PER IGEE Km.	TRANSMITTING FREQ. (MC/S)
1964	4 LAUNCHES (CONT'D)	CONT'D)								
1967	4 76E		935	ns	21 NOV	116.2	81,35	2489	533	
1961			936	ns	21 NOV	115.3	81,31	2358	578	
1967	t 76G		937	Sn		116.0	81,43	2493	512	
1967			939	ns	21 NOV	114.8	81.35	2332	567	
1964			940	SD	21 NOV	116.0	81.31	2471	534	
1967			941	SD		116.2	81.35	2472	551	
1967			096	ns		116.4	81.47	2441	604	
1967			1411	ns		116.3	81.38	2488	545	
1967		MARINER 4	938	ns		HELIOCENTRIC	TRIC ORBIT	L		
1967			942	ΩS		HELIOCENTRIC		T.		
1967		ZOND 2	945	USSR		HELIOCENTRIC	TRIC ORBIT	LI		
1967			953	SN	13 DEC	106.0	96*68	1068	1018	
1967			926	ns	13 DEC	106.3	90.06	1086	1027	
1967			959	Sn		106.3	89.99	1087	1027	135.650\$162\$324
1967			965	Sn	13 DEC	106.3	89.99	1090	1025	\$150\$400
1967			996	ns.	13 DEC	106.3	89.97	1086	1028	
1967	ω		296	Sn		106.3	86.68	1087	1025	
1964	4 83G		1099	SN		106.3	89.99	1085	1029	
1967	4 83H		1528	SO		106.3	89.97	1085	1027	
1967	4 83J		1608	Ω S	13 DEC	106.3	86.99	1001	1023	
1964	œ	EXPLORER 26	696	ns	21 DEC	451.6	19.85	25936	300	136.273
1965	5 LAUNCHES									
1965	5 03A		973	Sn	19 JAN	97.6	98.72	831	459	
1965		TIROS 9	978	ns	22 JAN	119.2	96.38	2583	902	\$136.234\$136.198
1967	5 04B		979	SD	22 JAN	119.3	96.41	2593	707	
1965	2 04C		1312	SD		118.0	96.35	2515	672	
1961	5 04D		1313	Sn	22 JAN	120.4	96.41	2667	731	
1967	5 06A	COSMOS 53	983	USSR	30 JAN	94.3	48.70	737	210	

						2 .	890			,									+ j,												
TRANSMITTING FREQ. (MC/S)		136.713					\$136,410;136,890												136,766	136,800	136,840										
PER IGEE Km.		551	545	2777	2760	2779	667	967		261	261	257	271	237	585	519	606	606	806	806	906	910	905	206	406	289	283	288	265	261	263
APOGEE Km.		624	636	2801	2796	2806	725	736		1581	1574	1470	1756	508	625	969	941	941	941	945	945	938	940	942	076	954	927	921	1554	1581	1474
INCLI- NATION		32,86	32,86	32,13	32.14	32,13	31.75	31.74	TRIC ORBIT	56.05	56.03	56.03	56.10	55.99	65.02	65.04	70.08	70.07	70.07	70.07	70.09	70.09	70.09	70.09	70.10	86.68	86*68	90.00	56.05	56.04	56.04
PER IOD MINUTES		96.5		145.6	145.4	145.7	97.0	97.1	BARYCENT	103.5	103.4	102.3	105.4	93.3	8.96	6.96	103.5	103.5	103.5	103.5	103.5	103.5	103.4	103.5	103.5	97.1	8.96	8.96	103.2	103.5	102.4
LAUNCH		3 FEB	3 FEB	11 FEB	11 FEB	11 FEB	16 FEB	16 FEB	17 FEB	21 FEB	21 FEB	21 FEB			26 FEB	26 FEB	9 MAR	9 MAR	9 MAR	9 MAR	9 MAR	9 MAR	9 MAR	9 MAR	9 MAR	11 MAR	11 MAR	11 MAR	15 MAR	15 MAR	15 MAR
SOURCE		Sn	ns	ns	ns	ns	Ω S	us	ns	USSR	USSR	USSR	USSR	USSR	USSR	USSR	ns	ns	Ω S	ns	Ω S	US	Sn	SN	ns	Sn	ns	ÛS	USSR	USSR	USSR
CATALOGUE NUMBER		486	988	1000	1001	1002	1085	1088	1087	1089	1090	1091	1092	1094	1097	1098	1271	1244	1292	1291	1208	1293	1310	1272	1245	1250	1228	1248	1267	1268	1269
CODE NAME	1965 LAUNCHES (CONT'D)	ORB. SOL. OBS. 2					PEGASUS 1					COSMOS 56			COSMOS 58		GREB		GRAVITY GRADIENT III	SOLAR RAD.	EGRS III	OSCAR III	SURCAL	DODECAHEDRON	ROCKET BODY	EGRS II			COSMOS 61	COSMOS 62	coswos 63
OBJECT	1965 LAUNC		1965 07B		1965 08B	1965 08C					-					ī		-		'n			• •	1965 16H			'n	1965 170	1965 20A	1965 20B	1965 20C

			Saur 1									-					- K	324								200	-		7
TRANSMITTING FREQ. (MC/S)																		\$136.740\$162\$324 \$20\$40\$41\$360											
PER IGEE Km.			528	527	522	529		1273	1266	1269	1274	1272	35025	FAINED	199	813	502	076	934	836	1060	2782	2771	2774	552	553	554	760	565
APOGEE Km.			756	757	653	859	£	1322	1324	1322	1.320	1323	36296	NOT MAINTAINED	39666	38795	545	1311	1316	1309	1301	3740	14811	2800	196	496	656	675	1045
INCLI- NATION			66.86	98.98	98.97	99.03	NTRIC ORBIT	90.22	90.20	90.19	90.17	90.22	.13	ELEMENTS	65.18	65.26	95.19	41.16	41.17	41.09	41.18	32.12	32.09	32.14	98.58	98.60	98.62	•	98.63
PERIOD MINUTES			97.5	97.5	96.4	98.6	Œ	111.5	111.4	111.5	111.5	111.5	1437.3	CURRENT	720.3	702.7	95.1	107.8	107.8	106.7	109.0	157.0	309.9	145.6	100.0	100.0	6.66	7.96	101.0
LAUNCH		15 MAR	18 MAR	18 MAR	18 MAR	18 MAR	21 MAR	3 APR		3 APR		3 APR	6 APR	6 APR	23 APR	23 APR	28 APR	29 APR	29 APR	29 APR	29 APR	6 MAY	6 MAY	6 MAY	20 MAY	20 MAY	20 MAY	20 MAY	20 MAY
SOURCE		USSR	Sn	ns	ns	S O	SO	Sn	Sn	ns	ns	ΩS	ΩS	ns	USSR	USSR	SN	Sn	ns	ns	ns	SO	nS	ΩS	ns	ns O	ns	ns	Sn
CATALOGUE			1273	1289	1376	1463	1298	1314	1315	1316	1389	1399	1317	1318	1324	1967	1329	1328	1358	1995	2011	1359	1360	1361	1377	1378	1379	1380	1461
CODE NAME	(CONT'D)	**							EGRS IV				EARLY BIRD	ROCKET BODY	MOLNIA 1			EXPLORER 27											
OBJECT	1965 LAUNCHES (CONT'D)	1965 20D-20EE***	1965 21A	1965 210	1965 21E	1965 21F	1965 23B	1965 27A	1965 27B	1965 27C	1965 27D	1965 27E	1965 28A	1965 28B	1965 30A	1965 30D	1965 31B	1965 32A	1965 32B	1965 32C	1965 32D	'n	ı∩			ı۸	ь	1965 38D	1965 38E

				889									,924																	:
TRANSMITTING FREQ. (MC/S)				\$136.410;136.889		136.125							\$136.232\$136.924																	
PERIGEE Km.		551	551	508	513	196		1028	1028	1027	1026	767	745	742	616	824	219	224	516	541	536	541	545	548	501	244	467	425	445	407
APOGEE Km.		867	981	733	734	264247	II	1142	1140	1113	1146	505	837	845	840	887	911	969	244	583	557	613	638	641	534	653	512	438	695	407
INCLI- NATION		98.59	98.58	31.76	31.75	33.86	HELIOCENTRIC ORBIT	90.00	89.97	89.97	90.00	107.65	98.61	98.65	98.48	98.71	48.75	48.73	56.05	56.07	56.08	56.05	56.05	56.08	56.05	56.04	70.18	20.07	70.17	70.14
PER IOD MINUTES		98.9	100.1	97.1	97.2	8558.8	HELIOCE	106.9	106.9	106.6	106.9	94.6	100.7	100.7	99.3	102.0	96.1	94.1	95.2	6.56	92.6	96.2	96.5	9.96	95.0	7.96	94.4	93.3	93.8	93.0
LAUNCH		20 MAY	20 MAY	25 MAY	25 MAY			24 JUN						2 JUL	2 JUL	2 JUL	2 JUL	2 JUL	16 JUL	16 JUL			16 JUL		16 JUL	16 JUL	17 JUL	17 JUL	17 JUL	17 JUL
SOURCE		ns	S O	ns	nS	nS	USSR	ns	ns	Sn	ns	ns	ns	SN	ns	SN	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	ns	SN	US	Sn
CATALOGUE NUMBER		1462	1475	1381	1385	1388	1393	1420	1425	1428	1435	1422	1430	1433	1440	1529	1431	1432	1441	1442	1443	1444	1445	1448	1449	1473	1447	1452	1455	1744
CODE NAME	LAUNCHES (CONT'D)			PEGASUS 2	ROCKET BODY	EXPLORER 28	LUNIK 6						TIROS 10				COSMOS 70		COSMOS 71	COSMOS 72	COSMOS 73	COSMOS 74	COSMOS 75							
OBJECT	1965 LAUNCHE	1965 38F	1965 : 38G	1965 39A	1965 39B	1965 42A	1965 44A	1965 48A	1965 48B	1965 48C	1965 48D	1965 50A	1965 51A	1965 51B	1965 51C	1965 51D	1965 52A	1965 52B	1965 53A	1965 53B	1965 53C	1965 53D	1965 53E	'n	1965 536	1965 53H		1965 55B	1965 55C	1965 55D

			-			.590							-															ï		
TRANSMITTING FREQ. (MC/S)					136.768	\$136.410;136.590			136.840																					
PER IGEE Km.			105610	100511	266	511	518	502	1136	1135		1088	1102	1084	1089	1084	1087	1085	1082	1092	1083	1084	1357	1389	1412	1440	1464	1357	649	662
APOGEE Km.		II	116970	122195	111793	535	534	505	2426	2427	II	1194	1159	1194	1192	1198	1197	1191	1200	1189	1201	1199	1551	1552	1560	1567	1577	1516	1054	1000
INCLI- NATION		NTRIC ORBIT	34.81	34.45	36.88	28.87	28.87	107.36	69.23	69.25	CENTRIC ORBIT	90.03	90.01	90.01	90.00	90.01	90.00	00.06	90.03	90.02	00.06	90.06	56.09	56.09	56.10	56.10	56.08	56.15	98.62	98.82
PER IOD MINUTES		HELIOCENTRIC	6695.0	6670.3	2595.4	95.1	95.2	94.7	122.2	122.2	HELIOCE	108.1	107.9	108.1	108.1	108.1	108.1	108.1	108.1	108.1	108.1	108.1	115.0	115.3	115.7	116.1	116.4	114.6	101.9	101.5
LAUNCH		18 JUL	20 JUL	20 JUL	20 JUL	30 JUL	30 JUL	3 AUG	10 AUG	10 AUG	11 AUG	13 AUG	13 AUG	13 AUG		13 AUG	3 SEP	3 SEP		10 SEP										
SOURCE		USSR	nS	ns	SN	ns	ns	ns	ns	ns	nS	ns	ns	ns	nS	ns	ns	SN	ns	SN	ns	ns	USSR	USSR	USSR	USSR	USSR	USSR	n s	NS
CATALOGUE		1454	1458	1459	1460	1467	1468	1472	1506	1502	1503	1504	1508	1510	1511	1512	1514	1515	1520	1521	1522	1577	1570	1571	1572	1573	1574	1575	1580	1581
CODE NAME	LAUNCHES (CONT'D)	ZOND 3				PEGASUS 3			EGRS 5		CENTAUR 6												COSMOS 80	COSMOS 81	COSMOS 82	COSMOS 83	COSMOS 84			
OBJ ECT	1965 LAUNCHE	1965 56A	1965 58A	1965 58B	1965 58C	1965 60A	1965 60B	1965 62B	1965 63A	1965 63B		1965 65A				1965 65E	1965 65F	1965 656	1965 65H	1965 65J	1965 65K	1965 65L	1965 70A	1965 70B	1965 70C	1965 70D	1965 70E	1965 70F	1965 72A	1965 72B

TRANSMITTING FREQ. (MC/S)					9										. ,				\$136.200\$400.250	\$400.850					\$136.830 \$16 2 \$324\$972				136,530		
PER IGEE Km.		635	653	654	647	1282	1303	1324	1354	1378	1380	1371	1375	1382	1391	412	414	334	416		416	729		412	1119	1116			680	715	
APOGEE Km.		1004	1051	1181	939	1635	1.650	1663	1671	1684	1695	1677	1689	1756	1,765	3451	3445	39961	1515		1508	782		517	2273	2274	<u>.</u>	<u></u>		874	· •
INCLI- NATION		98.79	98.63	98.62	98.63	56.04	56.05	56.09	56.09	56.08	56.11	56.09	56.04	56.14	56.18	144.30	144.30	64.91	87.35		87.36	32.31		48.43	59.38	59,41	HELIOCENTRIC ORBIT	HELIOCENTRIC ORBIT	50.73	59.73	
PER IOD MINUTES		101.3	101.9	103.3	100.7	115.1	115.5	115.8	116.2	116.7	116.8	116.5	116.7	117.5	117.7	125.7	125.6	716.4	104.3		104.3	100.0		93.9	120.3	120.3	HEL10CEN	HELIOCEN	100 8	100.8)
LAUNCH		10 SEP	10 SEP	10 SEP	10 SEP	18 SEP	18 SEP	18 SEP	18 SEP	18 SEP	18 SEP	18 SEP	18 SEP	18 SEP	18 SEP	5 OCT		13 OCT			14 OCT	15 OCT		19 OCT	VON 9	VON 9	12 NOV		-	19 NOV	
SOURCE		ns	nS	S D	ns	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	ns	ns	USSR	Sn		ns	Sn	Sn	USSR	SD	SD	USSR	USSR	110	SI	}
CATALOGUE NUMBER		1582	1583	1931	1932	1584	1585	1586	1587	1588	1589	1590	1591	1617	1618	1613	1616	1621	1620		1625	1624		2098	1726	1729	1730	1736	1738	1739	
CODE NAME	LAUNCHES (CONT'D)					COSMOS 86	COSMOS 87	COSMOS 88	COSMOS 89	COSMOS 90								2nd MOLNIYA I	000 2			TITAN 3 C-4	(B***		EXPLORER 29		VENERA 2		EVEL ABEB 30	EAFLURER 30	
OBJECT	1965 LAUNCHI	1965 720	1965 72D	iO			1965 73B										1965 78B	1965 80A	1965 81A		1965 81B	1965 82A				1965 R9B				1965 93A	

NATION Km. Km. FREQ. (MC/S)	840 760 1924 1858 1799 1806 1579	2977 505 2980 504 2980 504 2980 504 2984 506 2976 501 2984 506	88 762 87 768 47 783 26 779 0RBIT 1241 18 1241 99 655	e c
	108.8 34.7 105.9 34.7 108.6 34.7		CENT	000044
NON	NOV	NO N NO	DEC DEC DEC DEC DEC DEC	DEC DEC DEC DEC
US 19 US 19 US SR 26 US SR 26 US SR 26 FRENCH 26 FRENCH 26 FRENCH 26 FRENCH 26			# # # # # # # # # # # # # # # # # # #	USSR 21 USSR 21 US 21 US 21 US 21
2013 2088 1777 1779 1779 1778 1805 1996 1804	1804	1807 1808 1944 1948 1951 2092	1814 1815 1934 1935 1841 1842 1843	1846 1847 1863 1870 1902
COSMOS 91 A-1 ALOUETTE 2		EXPLORER 31	€.	COSMOS 101 TITAN 3 C-8 LES 4 OSCAR IV LES 3
1965 93C 1965 93D 1965 95A 1965 95B 1965 96B 1965 96C 1965 96D		10 10 10 10 10 10 10		1965 107A 1965 107B 1965 108A 1965 108B 1965 108C

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TRANSMITTING FREQ. (MC/S)												\$136.230\$136.920														
PER IGEE Km.		606	906	968	009		283	282	861	861		707	703	889	693	508	503	502	222	219	207	505	533	501	523	452
APOGEE Km.		1086	1086	086	629		521	485	1217			840	870	758	926	511	206	206	808	731	2731	2740	2755	2704	2715	2710
INCLI- NATION		89.10	89.11	89.20	56.04		48.37	48.37	89.71	89.70	TRIC ORBIT	97.90	97.87	97.76	98.05	82.08	82.08	82.10	48.88	48.85	34.07	34.07	34.06	33.06	34.06	34.02
PER IOD MINUTES		105.0	105.0	103.8	0.76		92.7	92.4	105.9		BARYCEN	100.3	100.6	99.2	101.4	8.46	64.7	64.7	95.1	94.4	118.7	118.7	119.2	118.4	118.7	117.8
LAUNCH		-			28 DEC 28 DEC		25 JAN	25 JAN	28 JAN	28 JAN	31 JAN		3 FEB					9 FEB	11 FEB	11 FEB	17 FEB					
SOURCE		ns	Sn	Ω S	USSR USSR		USSR	USSR	US	ns	USSR	Ω S	SN	SN	ΩS	Ω S	Ω S	Sn	USSR	USSR	FRENCH	FRENCH	FRENCH	FRENCH	FRENCH	FRENCH
CATALOGUE		1864	1865	2086	1868		1949	1950	1952	1953	2001	1982	1983	2085	2118	1997	2003	2004	2002	2007	2016	2017	2018	2020	2021	2023
CODE NAME	s (cont'd)				112A COSMOS 103 112B-112Q*****	S	COSMOS 106					ESSA - 1							COSMOS 108		D-1A					
OBJECT	1965 LAUNCHES (CONT'D)	1965 109A	1965 109B		• • • •	1966 LAUNCHES	1966 04A										1966 09B		1966 11A				_		Ţ	2 7

TRANSMITTING FREQ. (MC/S)			\$136,770\$137,500												
PER IGEE Km.		177	1358	1356	285		797	213	891	895	887	966	993	884	634
APOGEE Km.		670	1417	1420	297		284	504	1128	1126	1012	1048	1051	1014	935
INCLI- NATION		51.85	101,00	100.98	28.88		28.84	72.08	89.72	89.74	144.50	144.60	144.60	144.50	98.62
PER IOD MINUTES		0.76	113.5	113.5	4.06		90.4	91.7	105.3	105.3	104.1	105.6	105.6	104.1	100.5
LAUNCH			28 FEB									30 MAR			
SOURCE		USSR	US	US	US		ΩS	USSR	Ω	ΩS	ūS	Sn	NS US	OS 0	Sn
CATALOGUE NUMBER		2071	2091	2096			2115	2108	2119	2120	2121	2122	2123	2124	2125
CODE NAME	s (CONT'D)		ESSA 2			TARGET VEHICLE									
OBJECT	1966 LAUNCHES (CONT'D)	1966 15B		1966 16B	1966 19A					1966 24B		1966 25B		1966 25D	1966 26A

FOLLOWING ARE THE INITAL ELEMENTS OF OBJECTS WHOSE LAUNCH AND ORBIT DECAY OCCURED WITHIN THIS REPORTING PERIOD:

<u>OBJECT</u>	CODE NAME	CATALOGUE NUMBER	SOURCE	PERIOD MINTUES	INCLI- NATION	APOGEE Km.	PERIGEE Km.	TRANSMITTING FREQ. (MC/S)
		2113	ns.	89.6	75.04	321	186	
	GT-8	2105	nS	88.8	28.90	265	. 160	
		2106	Sn	89.9	28.78	398	141	
	COSMOS 112	2107	USSR	92.0	72.66	545	206	
		2110	USSR	90.3	72.06	375	201	
		2111	USSR	89.9	72.08	352	184	
		2109	ns	89.0	101.00	301	147	
1966 22B		2112	ns	88.2	100.90	236	137	
	COSMOS 113	2114	USSR	9.68	64.90	314	202	
		2116	USSR	89.5	64.90	298	206	
		2117	USSR	89.3	65.16	292	192	

- * APHELION PERIHELION IN ASTRONOMICAL UNITS, INCLINATION TO ECLIPTIC.
- WITH 1961 OMICRON 1 AND 1961 OMICRON 2. OBJECTS OF THIS SERIES THAT HAVE DECAYED ** TWO HUNDRED AND TEN METAL OBJECTS HAVE BEEN IDENTIFIED AS HAVING BEEN LAUNCHED CAN BE FOUND IN THE DECAYED OBJECTS LISTS.
 - ONE HUNDRED AND TWENTY TWO OBJECTS HAVE BEEN IDENTIFIED AS HAVING BEEN LAUNCHED WITH 1965 20A, 1965 20B AND 1965 20C. OBJECTS OF THIS SERIES THAT HAVE DECAYED CAN BE FOUND IN THE DECAYED OBJECTS LISTS. ***
- TWO HUNDRED AND FORTY ONE OBJECTS HAVE BEEN IDENTIFIED AS DEBRIS ASSOCIATED WITH 1965 82A, OBJECTS OF THIS SERIES THAT HAVE DECAYED CAN BE FOUND IN THE DECAYED OBJECTS LISTS. ****
 - FOURTEEN OBJECTS HAVE BEEN IDENTIFIED AS DEBRIS ASSOCIATED WITH 1965 112A. ****
- S TRANSMITTING ON COMMAND ONLY.
- TRANSMITTING WHEN IN SUNLIGHT ONLY.

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NO CATALOGUE NUMBER ASSIGNED.

DECAY		1 DEC 57 EARLY JAN 58 14 APR 58		JUN	3 DEC 58	APR	OCT	JAN	OCT	DEC		MAR	APR	JUL	PRIOR JUL 61	SEP	FEB	OCT			MAR	13 SEP 59****
LAUNCH		4 OCT 4 OCT 3 NOV			15 MAY					6 DEC					7 AUG							
SOURCE		USSR USSR USSR		ns	USSR	USSR	ns	ns	ns	ns		ΩS	ns	ns	ns	US	nS	ns	USSR	ns	SO	USSR
CATALOGUE NUMB ER		001 002 003		900	200	800	600	010	110	111		013	014	015	017	018	026	019	021	024	025	114
CODE NAME		ROCKET BODY SPUTNIK 1 SPUTNIK 2		EXPLORER 3	ROCKET BODY	SPUTNIK 3	EXPLORER 4	SCORE	PIONEER 1	PIONEER 3		DISCOVERER 1	DISCOVERER 2	EXPLORER 6	ROCKET BODY	DISCOVERER 5	CAPSULE	DISCOVERER 6	LUNIK 3	DISCOVERER 7	DISCOVERER 8	LUNIK 2
OBJECT	1957 LAUNCHES	ALPHA 1 ALPHA 2 BETA 1	1959 LAUNCHES	GAMMA 1	DELTA 1	DELTA 2	EPSILON 1	ZETA 1	ETA 1	THETA 1	1959 LAUNCHES	BETA 1	GAMMA 1	DELTA 1	DELTA 2	EPSILON 1	EPSILON 2	ZETA 1	THETA 1	KAPPA 1	LAMBDA 1	XI 1

OBJECT	CODE NAME	CATALÖGUE NUMBER	SOURCE	LAUNCH	DECAY
1960 LAUNCHES					
GAMMA 1	ROCKET BODY	030	SII	13 APR	18 4115 60
GAMMA 3	METAL OBJECT	033	Sn	13 APR	og Tor
DELTA 1	DISCOVERER 11	032	Sn	15 APR	26 APR 60
EPSILON 1	SPUTNIK 4	034	USSR	15 MAY	5 SEP 62
EPSILON 2	ROCKET BODY	035	USSR	15 MAY	17 JUL 60
EPSILON 3	NONE	036	USSR	15 MAY	15 OCT 65
EPSILON 4	NONE	037	USSR	15 MAY	PRIOR JUL 61
EPSILON 5	NONE	038	USSR	15 MAY	SEP-OCT 60
EPSILON 6	NONE	039	USSK	15 MAY	24 SEP 60
	NONE	040	USSR	15 MAY	24 SEP 60
_	NONE	041	USSR	15 MAY	SEP-OCT 60
EPSILON 9	NONE	042	USSR	15 MAY	SEP-OCT 60
ZETA 2	METAL OBJECT	044	US	24 MAY	5 DEC 60
THETA 1	DISCOVERER 13	048	Sn	10 AUG	14 NOV 60
THETA 1#	CAPSULE	NNA	ns	10 AUG	11 AUG 60**
KAPPA 1	DISCOVERER 14	054	ns	18 AUG	16 SEP 60
KAPPA 1#	CAPSULE	NNA	ns	18 AUG	19 AUG 60**
LAMBDA 1	SPUTNIK 5	055	USSR	19 AUG	20 AUG 60*
LAMBDA 2	ROCKET BODY	056	USSR	19 AUG	23 SEP 60
MU 1	DISCOVERER 15	057	Sn	13 SEP	18 OCT 60
MU 1#	CAPSULE	NNA	ns	13 SEP	15 SEP 60**
OMICRON 1	DISCOVERER 17	061	ns	12 NOV	29 DEC 60
OMICRON 1#	CAPSULE	NNA	us	12 NOV	14 NOV 60
RHO 1	SPUTNIK 6	065	USSR	1 DEC	2 DEC 60
RHO 2	ROCKET BODY	990	USSR	1 DEC	2 DEC 60
SIGMA 1#	CAPSULE	NNA	ns	7 DEC	10 DEC 60**
SIGMA 1	DISCOVERER 18	790	Sil	7 DEC	2 APR 61
TAU 1	DISCOVERER 19	068	ns	20 DEC	23 JAN 61

DECAY		26 FEB 61	12-13 FEB 61	17 MAR61		24 FEB 61				28 JUL 62			OCT		MAR		MAR	MAR	MAR	MAR	MAR		APR		SEP	12 APR 61***	APR	•	12 JUL 61	19 JUN 61
LAUNCH		4 FEB	4 FEB							17 FEB		17 FEB		18 FEB	22 FEB	9 MAR			9 MAR						8 APR	12 APR		•	16 JUN	16 JUN
SOURCE		USSR	USSR	USSR	USSR	USSR	USSR	ns	ns	SD	Sn	US	ns	ns	ns	USSR	USSR	USSR	USSR	USSR	USSR	USSR	Sn	US	Sn	USSR	USSR	US	Sn	Sn
CATALOGUE NUMBER		071	072	073	920	077	078	081	086	083	088	680	060	084	780	091	092	093	094	960	960	260	100	102	106	103	104	NNA	108	109
CODE NAME		SPUTNIK 7	ROCKET BODY	NONE	ROCKET BODY	SPUTNIK 8	NONE	EXPLORER 9	NONE	DISCOVERER 20	NONE	NONE	NONE	DISCOVERER 21	TRANSIT 3B & LOFTI	SPUTNIK 9	NONE	NONE	NONE	SPUTNIK 10	ROCKET BODY	NONE	DISCOVERER 23	CAPSULE	NONE	VOSTOK 1	ROCKET BODY	CAPSULE	DISCOVERER 25	NONE
OBJECT	1961 LAUNCHES	BETA 1	BETA 2	BETA 3	GAMMA 2	GAMMA 3	GAMMA 4	DELTA 1	DELTA 4	EPSILON 1	EPSILON 2	EPSILON 3	EPSILON 4	ZETA 1	ETA 1	THETA 1	THETA 2	THETA 3	THETA 4	IOTA 1	IOTA 2	IOTA 3	LAMBDA 1	LAMBDA 2	LAMBDA 3	MU 1	MU 2	XI 1#	XI 1	XI 2

DECAY		31 AUG 65	30 SEP 62	16 JUN 62	29 JAN 62	21 FEB 66		DEC	JUL	JUL		AUG	AUG	SEP	AUG	SEP	SEP	DEC	15 SEP 61**	SEP	SEP	SEP	SEP		NOV		OCT		DEC	DEC	30 NOV 61	9 DEC 61
LAUNCH		NUL 62	29 JUN	29 JUN		2.9 JUN		7 JUL	8 JUL	12 JUL	6 AUG								12 SEP								13 OCT	13 OCT	21 OCT	5 NOV	S NOV	S NOV
SOURCE		Sn	ns.	US	US	OS	ns	us		SU	USSR	USSR	US	ns	US	US	ns	ns	Sn	ns	US	US	ns	. US	115	ns	US	US	ß	US	Sn	US
CATALOGUE NUMBER		359	140	143	171	220	231	160	NNA	164	168	169	173	174	180	181	NNA	182	NNA	185	187	183	184	186	189	NNA	190	191	193	197	198	199
CODE NAME	CONT'D)	METAL OBJECT	METAL OBJECT			METAL OBJECT	METAL OBJECT	DISCOVERER 26	CAPSULE	METAL OBJECT	VOSTOK	ROCKET BODY	RANGER 1	ROCKET BODY	EXPLORER 13	DISCOVERER 29	CAPSULE	DISCOVERER 30		METAL OBJECT	METAL OBJECT	MA - 4	ROCKET BODY	DISCOVERER 31		CAPSULE	METAL OBJECT	METAL OBJECT		DISCOVERER 34	METAL OBJECT	METAL OBJECT
OBJECT	1961 LAUNCHES (CONT'D)	OMICRON 12	OMICRON 25			OMICRON 57	OMICRON 62	PI 1	PI 1#	SIGMA 2	TAU 1	TAU 2	PHI 1	PHI 2	CHI 1	PSI 1	PSI 1#	OMEGA 1	OMEGA 1#		OMEGA 3	A-ALPHA 1	A-ALPHA 2	A-BETA 1	A - GAMMA 1	A - GAMMA 1	A-GAMMA 2	A-GAMMA 3		A-FPSILON 1	A-EPSILON 2	A-EPSILON 3

1961 LAUNCHES (CONT'D) A - EPSTLON 5 METAL OBJECT 200 US 5 NOV 10 DEC 61 A - EPSTLON 5 METAL OBJECT 203 US 5 NOV 12 DEC 61 A - EPSTLON 5 METAL OBJECT 203 US 15 NOV 12 DEC 61 A - EPSTLON 6 METAL OBJECT 203 US 15 NOV 12 NOV 61++++++++++++++++++++++++++++++++++++	OBJECT	CODE NAME	CATALOGUE NUMBER	SOURCE	LAUNCH	DECAY
PSTILON 4 METAL OBJECT 200 US 5 NOV 10 DEC FSILON 5 METAL OBJECT 203 US 5 NOV 12 DEC FSILON 5 METAL OBJECT 203 US 5 NOV 12 DEC FSILON 6 DISCOVERER 35 201 US 15 NOV 16 NOV ETA 2 METAL OBJECT 207 US 15 NOV 16 NOV ETA 1 MA-S 208 US 18 NOV 20 NOV DTA 1 MA-S 208 US 29 NOV 20 NOV DTA 2 DISCOVERER 36 213 US 29 NOV 20 NOV APPA 1 DISCOVERER 36 213 US 12 DEC 16 DEC APPA 1 DISCOVERER 36 214 US 12 DEC 16 DEC APPA 1 APPA 2 0SCAR 1 US 12 DEC 16 DEC APPA 3 METAL OBJECT 219 US 22 DEC 14 AUG APPA 1 FRI ENDSHIP 7 240 US	1961 LAUNCHES (CONT'D)				
NETT OFFICE 203 US 5 NOV 12 DEC		METAL OBJECT	200	ns		
ETA 1 DISCOVERER 35 201 US 15 NOV 3 DEC ETA 2 METAL OBJECT 206 US 15 NOV 16 NOV		METAL OBJECT	203	ns		
ETA 1## CAPSULE NNA US 15 NOV 16 NOV ETA 2 METAL OBJECT 207 US 15 NOV 23 NOV JETA 1 MA-5 208 US 18 NOV 29 NOV JTA 1 MA-5 208 US 29 NOV 29 NOV JTA 2 ROCKET BODY 209 US 29 NOV 29 NOV JTA 2 ROCKET BODY 209 US 29 NOV 29 NOV JTA 2 ROCKET BODY 209 US 12 DEC 8 MAR APPA 1 DISCOVERER 36 213 US 12 DEC 19 DEC APPA 3 METAL OBJECT 215 US 12 DEC 19 DEC APPA 3 METAL OBJECT 215 US 22 DEC 19 DEC APBA 1 A S A S DEC 31 JAN ARBD 2 A S A S DEC 31 JAN A LONCHES A S A S DEC 31 JAN A LA I FRIENDSHIP 7 </td <td>A-ZETA 1</td> <td></td> <td>201</td> <td>US</td> <td></td> <td>DEC</td>	A-ZETA 1		201	US		DEC
ETAL METAL OBJECT 207 US 15 NOV 23 NOV HETAL RANGER 206 US 18 NOV 20 NOV 1A A-S 206 US 29 NOV 20 NOV 2APA 1 0.8 12 DEC 8 MAR APPA 1 0.5 12 DEC 8 MAR APPA 1 0.5 12 DEC 16 DEC APPA 2 0.5 12 DEC 16 DEC APPA 3 0.5 12 DEC 16 DEC ANBDA 2 0.5 12 DEC 14 AUG ANBDA 2 1.5 0.5 1.5 1.5 ANBDA 3 0.5 0.5 0.5 0.5 1.5 1.5 ANBDA 3 0.5 0.5<	•	CAPSULE	NNA	ns		NOV
HETA 1 RANGER 2 206 US 18 NOV 20 NOV OTA 1 MA - 5 208 US 29 NOV 29 NOV OTA 1 MA - 5 208 US 29 NOV 29 NOV APPA 1 DISCOVERER 36 213 US 12 DEC 16 DEC APPA 14 CAPSULE NAA US 12 DEC 16 DEC APPA 14 CAPSULE NAA US 12 DEC 16 DEC APPA 2 OSCAR 1 214 US 12 DEC 16 DEC APPA 3 METAL OBJECT 215 US 12 DEC 19 DEC ANBDA 2 LICA US 12 DEC 19 DEC 14 AUG ANBDA 2 LICA US 22 DEC 14 AUG 14 AUG ANBDA 2 LICA US 22 DEC 14 AUG 14 AUG 15 AUG	A-ZETA 2	METAL OBJECT	207	ns		NOV
TTA 1 MA-5 208 US 29 NOV 20 NOV 30 NOV	A-THETA 1	RANGER 2	506	Sn		NOV
7TA 2 ROCKET BODY 209 US 29 NOV 30 NOV APPA 14 DISCOVERER 36 213 US 12 DEC 8 MAR APPA 14 CAPSULE NNA US 12 DEC 16 DEC APPA 2 OSCAR 1 215 US 12 DEC 14 AU APPA 3 METAL OBJECT 215 US 22 DEC 14 AU APPA 1 TAPPA 3 METAL OBJECT 219 US 22 DEC 14 AU AMBDA 2 AMBDA 2 218 US 22 DEC 14 AU AMBDA 2 218 US 22 DEC 14 AU AMBDA 3 219 US 22 DEC 9 JAN AMBDA 3 219 US 22 DEC 9 JAN AMBDA 4 1 1 1 1 1 AMBDA 5 240 US 22 DEC 9 JAN AM 5 ROCKET BODY 24 US 27 FEB 4 MAR LION 14 METAL OBJECT 249	A-IOTA 1	MA-5	208	ns		NOV
APPA 1 DISCOVERER 36 213 US 12 DEC 8 MAR APPA 14 CAPSULE NNA US 12 DEC 16 DEC APPA 2 OSCAR 1 214 US 12 DEC 16 DEC APPA 3 METAL OBJECT 215 US 22 DEC 19 DEC AMBDA 1 METAL OBJECT 218 US 22 DEC 14 AUG AMBDA 2 218 US 22 DEC 14 AUG AMBDA 3 219 US 22 DEC 14 AUG AMBDA 3 219 US 22 DEC 14 AUG AMBDA 3 219 US 22 DEC 9 JAN AMBDA 3 240 US 22 DEC 9 JAN AA 1 CKCKET BODY 241 US 21 FEB 4 MAR LION 1 DISCOVERER 38 247 US 27 FEB 3 MAR LION 2 METAL OBJECT 249 US 27 FEB 3 MAR LION 4 METAL OBJECT 251 US	A-IOTA 2	ROCKET BODY	506	Sn		NOV
APPA 1# CAPSULE NNA US 12 DEC 16 DEC APPA 2 OSCAR 1 214 US 12 DEC 15 DEC 31 JAN APPA 3 METAL OBJECT 215 US 12 DEC 19 DEC AMBDA 1 217 US 22 DEC 14 DEC AMBDA 2 218 US 22 DEC 14 DEC AMBDA 3 219 US 22 DEC 14 DEC AMBDA 3 219 US 22 DEC 31 DEC AMBDA 3 219 US 22 DEC 9 JAN A 1 FRIENDSHIP 7 240 US 22 DEC 9 JAN AA 2 ROCKET BODY 241 US 20 FEB 4 MAR LION 1 DISCOVERER 38 247 US 27 FEB 3 MAR LLON 2 MCKET BODY 249 US 27 FEB 3 MAR LLON 3 METAL OBJECT 250 US 27 FEB 3 MAR LLON 4 METAL OBJECT 256 <td>A-KAPPA 1</td> <td></td> <td>213</td> <td>ns</td> <td></td> <td>MAR</td>	A-KAPPA 1		213	ns		MAR
APPA 2 OSCAR 1 214 US 12 DEC 31 JAN APPA 3 METAL OBJECT 215 US 12 DEC 19 DEC AMBDA 1 EALONCHES 218 US 22 DEC 19 DEC AMBDA 2 CAUNCHES 31 DEC 31 DEC 31 DEC AA 1 FRIENDSHIP 7 240 US 20 FEB 21 FEB AA 2 ROCKET BODY 241 US 20 FEB 21 FEB AA 3 ROCKET BODY 247 US 27 FEB 3 MAR LION 1 DISCOVERER 38 247 US 27 FEB 3 MAR LION 3 METAL OBJECT 249 US 27 FEB 3 MAR LION 4 METAL OBJECT 251 US 7 MAR 1 ABCKET BODY 256 US 27 FEB 3 MAR 1 ABCKET BODY 256 US 27 FEB 3 MAR 1 ABCKET BODY 256 US 3 MAR 1 ABCKE		CAPSULE	NNA	ns		DEC
APPA 3 METAL OBJECT 215 US 12 DEC 19 DEC AMBDA 1 217 US 22 DEC 14 AUG AMBDA 2 218 US 22 DEC 14 AUG AMBDA 3 219 US 22 DEC 9 JAN 2 LAUNCHES 3 A 2 DEC 9 JAN 2 LAUNCHES 3 A 2 DEC 9 JAN 4A 1 FRIENDSHIP 7 240 US 20 FEB 9 JAN 4A 2 ROCKET BODY 241 US 20 FEB 4 MAR 1LON 1 DISCOVERER 38 247 US 27 FEB 3 MAR 1LON 1 CAPSULE NNA US 27 FEB 3 MAR 1LON 2 RETAL OBJECT 249 US 27 FEB 3 MAR 1LON 3 METAL OBJECT 251 US 7 MAR 7 JUN 2 1 MAR 7 MAR 7 MAR 7 JUN 3 1 1 258 <td>A-KAPPA 2</td> <td>OSCAR 1</td> <td>214</td> <td>ns</td> <td></td> <td>JAN</td>	A-KAPPA 2	OSCAR 1	214	ns		JAN
AMBDA 1 US 22 DEC 14 AUG AMBDA 2 US 22 DEC 31 DEC 218 US 22 DEC 31 DEC 219 US 22 DEC 9 JAN 2 LAUNCHES ROCKET BODY 241 US 20 FEB 20 FEB 4A 1 ROCKET BODY 241 US 20 FEB 21 FEB AA 2 ROCKET BODY 242 US 27 FEB 21 FEB AA 1 DISCOVERER 38 247 US 27 FEB 21 FEB LLON 1# CAPSULE NNA US 27 FEB 3 MAR LLON 2 ROCKET BODY 248 US 27 FEB 3 MAR LLON 3 METAL OBJECT 249 US 27 FEB 7 MAR LLON 4 METAL OBJECT 251 US 7 MAR 7 JUN 2 MAR US 7 MAR 7 JUN 7 JUN 3 MAR US 7 MAR 7 JUN 7 JUN 4	A-KAPPA 3	METAL OBJECT	215	Sn		DEC
AMBDA 2 218 US 22 DEC 31 DEC AMBDA 3 219 US 22 DEC 31 DEC 2 LAUNCHES 2 LAUNCHES 3 LAC 3 LAC 3 LAC 4 I FRIENDSHIP 7 240 US 20 FEB 20 FEB 4A 2 ROCKET BODY 241 US 20 FEB 4 MAR AA 2 ROCKET BODY 247 US 27 FEB 21 FEB AA 1 DISCOVERER 38 247 US 27 FEB 21 MAR LLON 1# CAPSULE NNA US 27 FEB 3 MAR LLON 2 ROCKET BODY 248 US 27 FEB 3 MAR LLON 3 METAL OBJECT 249 US 27 FEB 3 MAR LLON 4 METAL OBJECT 251 US 7 MAR 7 JUN 2 AA AA AA AA AA AA AA 1 A AA AA AA AA AA AA AA	A-LAMBDA 1		217	ns		AUG
AMBDA 3 219 US 22 DEC 9 JAN 2 LAUNCHES 4 4 4 4 4 4 ABA 2 6 6 5 5 1 <td< td=""><td>A-LAMBDA 2</td><td></td><td>218</td><td>ns</td><td></td><td>DEC</td></td<>	A-LAMBDA 2		218	ns		DEC
4A 1 FRIENDSHIP 7 240 US 20 FEB 20 FEB 21 FEB 4A 2 ROCKET BODY 241 US 20 FEB 21 FEB 4 MAR 7A 1 DISCOVERER 38 247 US 27 FEB 21 MAR ILON 1 DISCOVERER 38 247 US 27 FEB 3 MAR ILON 2 ROCKET BODY 248 US 27 FEB 3 MAR ILON 2 METAL OBJECT 249 US 27 FEB 3 MAR ILON 4 METAL OBJECT 251 US 7 MAR 7 JUN 1 256 US 7 MAR 31 MAR 2 7 MAR 31 MAR 31 MAR	A-LAMBDA 3		219	SN	• •	JAN
4A 1 FRIENDSHIP 7 240 US 20 FEB 20 FEB 21 FEB 4A 2 ROCKET BODY 241 US 20 FEB 21 FEB 4 MAR TLON 1 DISCOVERER 38 247 US 27 FEB 21 MAR LLON 1 CAPSULE NNA US 27 FEB 3 MAR LLON 2 ROCKET BODY 248 US 27 FEB 3 MAR LLON 3 METAL OBJECT 249 US 27 FEB 3 MAR LLON 4 METAL OBJECT 251 US 7 MAR 1 ABRA US 7 MAR 7 JUN 2 ABRA 1 MAR 31 MAR	1962 LAUNCHES					
TA 2 ROCKET BODY 241 US 20 FEB 21 FEB 4 MAR IA 1 DISCOVERER 38 247 US 27 FEB 4 MAR ILON 1# CAPSULE NNA US 27 FEB 3 MAR ILON 2 ROCKET BODY 248 US 27 FEB 3 MAR ILON 3 METAL OBJECT 249 US 27 FEB 3 MAR ILON 4 METAL OBJECT 251 US 7 MAR 7 JUN 1 ABAR US 7 MAR 7 JUN 7 MAR 2 ABAR 1 MAR 1 MAR 1 MAR 1 MAR 1 MAR	GAMMA 1	FRIENDSHIP 7	240	ns		
TA 1 242 US 21 FEB 4 MAR LLON 1 DISCOVERER 38 247 US 27 FEB 21 MAR LLON 1# CAPSULE NNA US 27 FEB 3 MAR LLON 2 ROCKET BODY 248 US 27 FEB 3 MAR LLON 3 METAL OBJECT 251 US 27 FEB 3 MAR LLON 4 METAL OBJECT 251 US 7 MAR 7 JUN 1 A A A A A A A 1 A A A A A A A A A 1 A		ROCKET BODY	241	Sn		FEB
LLON 1 DISCOVERER 38 247 US 27 FEB 21 MAR LLON 1# CAPSULE NNA US 27 FEB 3 MAR LLON 2 ROCKET BODY 248 US 27 FEB 3 MAR LLON 3 METAL OBJECT 251 US 27 FEB 7 MAR LLON 4 METAL OBJECT 256 US 7 MAR 7 JUN 1 A A A A 31 MAR 2 B B A A A	DELTA 1		242	ns		MAR
LLON 1# CAPSULE NNA US 27 FEB 3 MAR LLON 2 ROCKET BODY 248 US 27 FEB 3 MAR LLON 3 METAL OBJECT 249 US 27 FEB 3 MAR LLON 4 METAL OBJECT 251 US 7 MAR 7 JUN 1 256 US 7 MAR 7 JUN 2 258 US 7 MAR 31 MAR	EPSILON 1		247	sn		MAR
LLON 2 ROCKET BODY 248 US 27 FEB 3 MAR LLON 3 METAL OBJECT 249 US 27 FEB 3 MAR LLON 4 METAL OBJECT 251 US 7 FEB 7 MAR 1 1 7 MAR 7 JUN 2 258 US 7 MAR 31 MAR 2 31 MAR 31 MAR		CAPSULE	NNA	ns		MAR 62**
LLON 3 METAL OBJECT 249 US 27 FEB 3 MAR 1LON 4 METAL OBJECT 251 US 27 FEB 7 MAR 1 256 US 7 MAR 7 JUN 2 258 US 7 MAR 31 MAR	EPSILON 2	ROCKET BODY	248	Sn		MAR
ILON 4 METAL OBJECT 251 US 27 FEB 7 MAR 1 256 US 7 MAR 7 JUN 2 258 US 7 MAR 31 MAR		METAL OBJECT	249	sn		MAR
1 256 US 7 MAR 7 JUN 2 258 US 7 MAR 31 MAR		METAL OBJECT	251	Sn		MAR
2 258 US 7 MAR 31 MAR	ETA 1		256	sa ·		
	ETA 2		258	ns	7 MAR	

DECAY		NOV	25 MAY 62	JUN	AUG	OCT	MAY	MAY	APR	APR	APR	APR	OCT	5 AUG 62	APR	JUN	MAY	APR	MAY	MAY	NOV	JUL	JUL	MAY	MAY		DEC	11 JUN 62	JUN 6
LAUNCH		7 MAR	16 MAR	16 MAR		6 APR								24 APR						29 APR						-	28 MAY	30 MAY	30 MAY
SOURCE		ns	USSR	USSR	USSR	USSR	ns	ns	ns	Sn	US	ns	USSR	USSR	USSR	USSR	USSR	n s	ns	ns.	US	S O	ns	Sn n	n s	USSR	USSR	ns	SO
CATALOGUE NUMBER		259	266	267	269	270	272	276	277	278	279	280	281	283	287	284	289	286	290	291	292	293	294	295	296	. 297	298	302	303
CODE NAME	(CONT'D)		COSMOS 1	ROCKET BODY	COSMOS 2	ROCKET BODY						RANGER 4	COSMOS 3	ROCKET BODY	COSMOS 4	ROCKET BODY	METAL OBJECT							AURORA 7	ROCKET BODY	COSMOS 5	ROCKET BODY		
OBJECT	1962 LAUNCHES (CONT'D)	ETA 3	THETA 1	THETA 2	IOTA 1	IOTA 2	KAPPA 2	LAMBDA 1	LAMBDA 2	LAMBDA 3	LAMBDA 4	MU 1	NU 1	NU 2	XI 1	XI 2	XI 3	PI 1	RHO 1	RHO 2	SIGMA 1	SIGMA 2	SIGMA 3	TAU 1	TAU 2	UPSILON 1	UPSILON 2	PHI 1	PHI 2

DECAY				JUN	JUN	0CT	12 JUL 62	JUL	JUL	SEP	AUG	SEP	JUL		-	AUG	1 AUG 62	AUG	31 JUL 62		AUG	AUG	AUG	AUG	-	AUG	AUG	17 AUG 63
LAUNCH		2 JUN	2 JUN				18 JUN		23 JUN							28 JUL					2 AUG		-					18 AUG
SOURCE		ns	Sn	Sn	NS	ns	Ω S	n s	Sn	SO.	USSR	USSR	Sn	Sn	ns	OS US	USSR	USSR	USSR	USSR	ns	US	ns	USSR	USSR	USSR	USSR	USSR
CATALOGUE NUMBER		304	305	306	307	308	310	314	315	316	338	339	342	343	344	345	346	347	348	349	360	362	361	363	364	365	366	367
CODE NAME	(CONT'D)		OSCAR 2								COSMOS 6	ROCKET BODY					COSMOS 7	ROCKET BODY	METAL OBJECT	METAL OBJECT				VOSTOK 3	ROCKET BODY	VOSTOK 4	ROCKET BODY	COSMOS 8
OBJECT	1962 LAUNCHES (CONT'D)	CHI 1	CH1 2	CHI 3	PSI 1	OMEGA 1	OMEGA 2	OMEGA 3	A-BETA 1	A-GAMMA 1	A-DELTA 1	A-DELTA 2	A-ZETA 1	A-ZETA 2	A-ETA 1	A-THETA 1	A-IOTA 1	A-IOTA 2	A-IOTA 3	A-IOTA 4	A-KAPPA 1	A-KAPPA 2	A-LAMBDA 1	A-MU 1	A-MU 2	A-NU 1	A-NU 2	A-XI 1

DECAY		DEC	28 AUG 62	SEP	31 AUG 62	SEP	AUG		SEP	SEP	SEP		SEP	3 SEP-1 OCT 62	21 SEP 62	OCT	SEP	SEP 6		SEP 6		SEP	SEP	9 VON	0CT 6	22 DEC 62	0CT 6	8 OCT 62		9
LAUNCH		18 AUG	25 AUG		25 AUG							1 SEP	1 SEP	1 SEP	1 SEP	1 SEP	12 SEP		12 SEP						^	27 SEP	_	27 SEP		27 SEP
SOURCE		USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	SN	USSR	USSR	USSR	USSR	SN	USSR	USSR	USSR	USSR	USSR	USSR	USSR	US	USSR	USSR	USSR	USSK	USSR	USSR
CATALOGUE		368	371	372	373	379	380	376	386	387	377	381	382	383	384	385	389	390	391	392	393	394	395	396	422	423	425	428	429	430
CODE NAME	IES (CONT'D)	ROCKET BODY																												
OBJECT	1962 LAUNCHES (CONT'D)	A XI 2	A PI 1		A PI 3	A PI 4	•	A PI 6	A PI 7	A PI 8	A SIGMA 1					A UPSILON 1	A PHI 1		A PHI 3		A PHI 5	A PHI 6	A PHI 7	A CHI 1	A OMEGA 1	A OMEGA 2	A OMEGA 3	A OMEGA 4	A OMEGA 5	A OMEGA 6

					***				-			•	2													,	-			
DECAY		3 OCT 62	<u>-</u>		OCT	OCT	16 NOV 62	21 OCT 62	5 NOV 62		JUN	OCT	DEC	FEB	NOV		DEC	DEC	2 JAN 63	DEC	DEC	NOV	DEC		DEC	DEC	17 DEC 62	DEC	23 DEC 62	6 DEC
LAUNCH		27 SEP		29 SEP	3 OCT	3 OCT	9 OCT	17 OCT	17 OCT				24 OCT						24 OCT									24 OCT	24 OCT	24 OCT
SOURCE		USSR	USSR	Sn	OS	Sn	US	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR
CATALOGUE NUMBER		431	435	427	433	434	436	437	438	441	442	443	456	457	458	459	460	482	483	484	485	486	487	491	492	493	767	495	967	497
CODE NAME	(CONT'D)				SIGMA 7	ROCKET BODY																								
OBJECT	1962 LAUNCHES (CONT'D)	A -OMEGA 7	A-OMEGA 8	B-BETA 1	B DELTA 1	B-DELTA 2	B-EPSILON 1	B-ZETA 1	B-ZETA 2	B-THETA 1	B-THETA 2	B-IOTA 1	B-IOTA 2	B-IOTA 3	B-IOTA 4	B-IOTA 5	B-IOTA 6	B-IOTA 7	B-IOTA 8	B-IOTA 9	B-IOTA 10	B-IOTA 11	B-IOTA 12	B-IOTA 13	B-IOTA 14	B-10TA 15	B-IOTA 16	B-IOTA 17	B-IOTA 18	B-IOTA 19

OBJECT	CODE NAME	CATALOGUE	SOURCE	LAUNCH	DECAY
1962 LAUNCHES (CONT'D)	ONT'D)				
B-10TA 20		768	USSR		DEC
		667	USSR		
B-IOTA 22		500	USSR	24 OCT	28 DEC 62
		501	USSR		
R-10TA 24		512	USSR	24 OCT	DEC
B-NI 1		777	USSR	1 NOV	
B-NE 2		677	USSR	1 NOV	NOV
1		451	USSR		NOV
B X1 2		452	USSR		NOV
B-X1 3		454	USSR		JAN
B-X1 4		488	USSR		25 DEC 62
B-X1 5		789	USSR		DEC
B_OMTCRON 1		453	Sn	S NOV	DEC
B-51 1		455	ns		DEC
B-BHO 1		481	ns		DEC
B. STOMA 1		067	ÜS		DEC
B-TAH 3		507	SO	13 DEC	JUL
B 11AU 3		508	S.O.	13 DEC	JAN
B DHI 1		505	Sn	14 DEC	JAN
B-FRI 1		517	USSR	22 DEC	30 DEC 62
B-OMEGA 2		518	USSR	22 DEC	JAN
1963 LAUNCHES					
1963 01A		521	USSR	4 JAN	5 JAN 63
		522	USSR	A J AN	
1963 01C		524	USSR	A J AN	

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DECAY					31 DEC 63			26 APR 63		NOV	AUG		APR	MAY	MAY	MAY 63		MAY	MAY	JUN		MAY	AUG	JUL	SEP	APR	JUN	JUN	63	19 JUN 63 ****	
LAUNCH					16 JAN			1 APR		3 APR	13 APR		22 APR	22 APR	28 APR	28 APR	15 MAY				22 MAY	22 MAY					24 MAY	24 MAY	12 JUN	14 JUN	
SOURCE		SN	US	US	US	USSR	USSR	Sn	USSR	US	USSR	USSR	USSR	USSR	USSR	USSR	US	US	US	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	US	USSR	
CATALOGUE		525	526	528	529	554	555	562	563	565	567	568	569	570	571	572	576	577	57.8	580	581	582	583	584	585	, r.c.	586	587	590	591	İ
CODE NAME	(CONT'D)									ROCKET BODY							FAITH 7	ROCKET BODY												VOSTOK 5	
OBJECT	1963 LAUNCHES (CONT'D)	1963 024						1963 07A							• •												1903 1/6	1905 10B		1963 20A	

DECAY			AUG	18 101 63		30 JUL 63			3 JUL 63	63		26 JUL 63	14-15 NOV 64		lur	JHL		AUG		VAG	VIIC				8 SEP 63			2 SEP 63	S.			10 SEP 63	
LAUNCH		14 JUN	15 JUN	15 JUN	15 JUN	_	15 JUN				16 JUN	27 JUN	29 JUN							31 JUL					24 AUG				29 AUG	6 SEP	6 SEP	das 9	
SOURCE		USSR	ns	ns	ns	ns	SU	US	ns	USSR	USSR	ns	ns	ns	Sn	US	ns	ns	ns	ns	Sil	USSR	USSR	ns	ns	ns	0.S	ns	ns	Sn	ns	SN	
CATALOGUE NUMBER		592	593	601	599	900	598	597	/19	595	596	609	615	616	618	619	620	621	623	626	627	632	633	636	642	637	638	639	079	641	663	799	
CODE NAME	LAUNCHES (CONT'D)			LOFT1 2A	SOLAR RADIATION					VOSTOK 6																							
OBJECT	1963 LAUNCHES	1963 20B	1963 21A	1963 21B	1963 21C	1963 21D	1963 21E	1963 21F	1963 21C	1963 23A	1963 23B	1963 25A		1963 27C	1963 28A	1963 28B	1963 28C	1963 29A		1963 32A				34A	1963 34B	1963 35A		1963 35C		~	1963 36B	1963 36C	

510-18(1/66)

DECAY			FEB	9 MAR 64	FEB	MAR	FEB		JUN	MAR	APR	AUG		MAR	MAR	SEP		APR	MAR	28 MAR 64	MAR	31 MAR		APR	APR		APR	MAY		12 APR 64	30 APR-1 MAY 64
LAUNCH		25 JAN	30 JAN	15 FEB	15 FEB	25 FEB											18 MAR			27 MAR				2 APR	2 APR		4 APR		4 APR	8 APR	
SOURCE		ns	ns	SN	ns	SN	US	USSR	USSR	USSR	USSR	ns	US	ns	Sn	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	SN	USSR
CATALOGUE		149	747	752	755	754	756	757	758	762	763	160	761	764	765	776	167	768	169	770	772	773	774	776	777	778	779	780	781	782	783
CODE NAME			RANGER 6					COSMOS 25								COSMOS 26				COSMOS 27							COSMOS 28			GEMINI 1	
OBJECT	1964 LAUNCHES	1964 04E	1964 07A	1964 08A	1964 08B	1964 09A	1964 09B			1964 10C	1964 10D	1964 11B					1964 13B								1964 16B			1964 17B			

DECAY			APR			APR	MAY	11 MAY	APR	27-28 APR 64	APR	MAY	MAY	Nic	MAY	NOS	JUN	OCT	AUG	NOS	70 .	JUN	Jar	AUG	AUG	JUL		Jur
LAUNCH		23 APR	23 APR	23 APR	23 APR	23 APR	25 APR			25 APR																		23 JUN
SOURCE		ns	Sn	Sn	SN	Sn	USSR	USSR	USSR	USSR	USSR	Sn	USSR	USSR	US	US	Sn	USSR	USSR	USSR	USSR	USSR	ns	SN	US	SD	USSR	USSR
CATALOGUE		786	787	788	789	790	791	792	793	764	795	962	797	798	799	800	802	803	804	807	808	810	811	820	814	821	816	817
CODE NAME	(CONT'D)						COSMOS 29						COSMOS 30			SATURN 6		COSMOS 31		COSMOS 32							COSMOS 33	
OBJECT	1964 LAUNCHES (CONT'D)	1964 20A			1964 20D		1964 21A		1964 21C	1964 21D		1964 22A		1964 23B	1964 24A					1964 29A		1964 29C	1964 30A	1964 30B			1964 33A	

OBJECT	CODE NAME	CATALOGUE	SOURCE	LAUNCH	DECAY
1964 LAUNCHES (CONT'D)	(CONT'D)				
1964 33C		818	USSR	23 JUN	
1964 33D		819	USSR	23 JUN	24 JUN 64
1964 34A	COSMOS 34	822	USSR	1 JUL	
1964 34B		823	USSR	1 JUL	
		825	ns	6 JUL	
1964 36B		826	US	nr 9 .	
		827	US	6 JUL	
		828	Sn	10 JUL	
1964 39A	COSMOS 35	833	USSR	15 JUL	
		834	USSR	15 JUL	
1964 39C		835	USSR	15 JUL	
		839	USSR	15 JUL	
		842	Sn	28 JUL	JUL
	COSMOS 36	844	USSR	30 JUL	FEB
		845	USSR	30 JUL	
		846	SD	5 AUG	
	COSMOS 37	848	USSR	14 AUG	
		849	USSR	14 AUG	
		850	Sn	14 AUG	
		852	Sn	14 AUG	
		853	USSR	18 AUG	
	COSMOS 39	854	USSR	18 AUG	
1964 46C	COSMOS 40	855	USSR	18 AUG	
		856	USSR	18 AUG	
		857	USSR	18 AUG	10 SEP 64
		859	USSR	18 AUG	_
1964 46G		860	USSR	18 AUG	6 SEP 64

DECAY			MAR	SEP	28 SEP 64	AUG	DEC	AUG	DEC	SEP	SEP	OCT	SEP	22 SEP 64	SEP	SEP	OCT	7 OCT 64	T UC	7 OCT 64	13-14 OCT 64	OCT	12 OCT 64	OCT	OCT	OCT	LUC	ב ב ב	28 OCT 64	T U	4 NOV 64
LAUNCH		•	21 AUG	22 AUG	22 AUG	22 AUG	22 AUG	22 AUG	22 AUG	13 SEP	13 SEP	14 SEP	14 SEP	18 SEP	23 SEP	23 SEP	24 SEP	24 SEP	5 OCT	100 9	6 oct	6 OCT		6 OCT					14 OCT		17 OCT
SOURCE		511	20	USSK	USSR	USSR	USSR	USSR	USSR	USSR	USSR	SO	Sn	ns	Sn	US	USSR	USSR	US	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	ns
CATALOGUE		861	4 C 9	000	900	808	300	866	867	088 -	 1 : 00 :	882	888	883	884	887	885	886	890	891	892	894	895	968	904	506	906	806	606	910	911
CODE NAME	(CONT'D)		COSMOS 41			CA SOMPOD		o va coma co	CO 3070 8 43					SAIUKN /			COSMOS 46			COSMOS 47				r dollarout	T GOENSON			COSMOS 48			
OBJECT	1964 LAUNCHES (CONT'D)	1964 48A	1964 49A	1964 49B					1964 554		1964 564			1964 58A			1964 508			1964 62A	170 +061 1067 7901										1964 6/A

DECAY		OCT	23 FEB 65	NOV	OCT	AUG	NOV	FEB	NOV	NOV	NOV	NOV	NOV	NOV	NO V	NOV	NOV	NOV	NO V	NOV	NOV	NOV	NOV	NOV	NOV	NOV	NOV	NOV	12 NOV 64		NOV
LAUNCH		23 OCT	23 OCT																										28 OCT		
SOURCE		us	US	SO	ns	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR
CATALOGUE		912	914	916	918	913	917	915	919	920	928	929	989	066	991	992	993	766	366	966	997	866	666	1003	1004	1005	1006	1007	1008	1009	1010
CODE NAME	(CONT'D)					COSMOS 49			COSMOS 50																						
OBJECT	1964 LAUNCHES	1964 68A	1964 68B				1964 69C													1964 70M						1964 70T		1964 70V		1964 70X	•

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OBJECT	CODE NAME	CATALOGUE	SOURCE	LAUNCH	DECAY
1964 LAUNCHES (CONT'D)	CONT'D)				
1964 702		1011	USSR	28 OCT	9 NOV 64
1964 70AA		1012	USSR	28 OCT	10 NOV 64
1964 70AB		1013	USSR		9 NOV 64
1964 70AC		1014	USSR	28 OCT	17 NOV 64
-		1015	USSR		12 NOV 64
		1016	USSR		NOV
1964 70AF		1017	USSR	28 OCT	
1964 70AG		1018	USSR		NO V
		1019	USSR		11 NOV 64
		1020	USSR		NOV
1964 70AK		1021	USSR		NOV
1964 70AL		1022	USSR		NOV
1964 70AM		1023	USSR		NOV
1964 70AN		1024	USSR		
1964 70AP		1025	USSR		NOV
		1026	USSR		NOV
1964 70AR		1027	USSR		NOV
1964 70AS		1028	USSR		NOV
		1029	USSR		NOV
		1030	USSR		NOV
1964 70AV		1031	USSR		
1964 70AW		1032	USSR		NOV
1964 70AX		1033	USSR		
1964 70AY		1034	USSR		NOV
1964 70AZ		1035	USSR	28 OCT	NOV
1964 70BA		1036	USSR		
1964 70BB		1037	USSR	28 OCT	NOV
1964 70BC		1038	USSR	28 OCT	
1964 70BD		1039	USSR	28 OCT	13 NOV 64

DECAY			12 NOV 64				17 NOV 64		NOV	NON	NOV	14 NOV 64	NOV	NOV	NON	13 NOV 64		NOV	NOV		NON		NOV	NOV				11 NOV 64	
LAUNCH					28 OCT						28 OCT	28 OCT			28 OCT			28 OCT			28 OCT	28 OCT		28 OCT	28 OCT	28 OCT	28 OCT	28 OCT	
SOURCE		USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	
CATALOGUE		1040	1041	1042	1043	1044	1045	1046	1047	1048	1049	1050	1051	1052	1053	1054	1055	1056	1057	1058	1059	1060	1061	1062	1063	1064	1065	1066))
CODE NAME	CONT'D)																												
OBJECT	1964 LAUNCHES (CONT'D)	1964 70BE		1964 70BG					1964 70BM			1964 7080			1964 70BT			1964 70RW		1964 70BY		1964 70CA				1964 70CE		1067 1061	

DECAY		17 NOV 64	14 NOV 64	16 NOV 64	13 NOV 64	12 NOV 64	10 NOV 64	NOV	13 NOV 64	N0V	N0V	N0 N0	NOV	NOV	NOV	N0V	N0V	NOV	NOV	NOV	DEC	DEC	DEC	DEC	NO NO NO	MAY	DEC	1 JAN 65	1 JAN 65	
LAUNCH		28 OCT	28 OCT	28 OCT	28 OCT	28 OCT	28 OCT	28 OCT	28 OCT	28 OCT	28 OCT	28 OCT	28 OCT	28 OCT	2 NOV	18 NOV	30 NOV	30 NOV	4 DEC	9 DEC	9 DEC	9 DEC	9 DEC	9 DEC						
SOURCE		USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	Sn	Sn	USSR	USSR	US	USSR	USSR	USSR	USSR	USSR	1 1 1
CATALOGUE		1067	1068	1069	1070	1071	1072	1073	1074	1075	1076	1077	1078	1079	1080	1081	1082	1083	1084	921	930	943	776	976	246	948	950	952	750	
CODE NAME	(CONT'D)																								COSMOS 51					
OBJECT	1964 LAUNCHES (CONT'D)	1964 70CH	•							1964 70CR		1964 70CT						1067 7007	1964 70DA	1064 714				1064 70A		1064 80R		1904 900	1004 001	

DECAY		JAN	DEC	DEC	SEP		JAN	JAN	11 JAN 65					13-14 JAN 65	FEB	JAN	JUN	9 JUL 65	JAN	JAN	JAN	MAR	MAR	FEB		MAR	
LAUNCH		9 DEC	10 DEC	11 DBC	15 DEC	15 DEC	15 DEC	19 DEC	21 DEC		11 JAN	11 JAN	11 JAN	11 JAN	15 JAN			19 JAN								22 FEB	22 FEB
SOURCE		USSR	Sn	ns	ITALY	ns	ns	ns	Sn		USSR	USSR	USSR	USSR	ns	Sn	Sn	ns	Sn	US	USSR	USSR	USSR	SN	USSR	USSR	USSR
CATALOGUE		955	676	951	957	958	962	961	796		896	696	970	971	972	982	716	975	980	981	984	985	986	1086	1093	1095	1100
CODE NAME	(CONT'D)			CENTUAR 4	SAN MARCO 1						COSMOS 52													RANGER 8	COSMOS 57		
OBJECT	1964 LAUNCHES (CONT'D)	1964 80F	1964 81A	1964 82A	1964 84A	1964 84B	1964 84C	1964 85A	1964 87A	1965 LAUNCHES	1965 01A	1965 01B	1965 01C	1965 01D	1965 02A	1965 02B	1965 03B		1965 05A	iO			1965 06D	1965 10A	1965 12A	1965 12B	1965 12C

| | FEB | FEB | MAR | MAR | FEB | MAR | MAR | MAR | FEB | FEB | MAR | MAR | FEB | MAR | FEB | MAR | MAR | MAR | MAR
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 | USSR | |
| | 1101 | 1102 | 1103 | 1104 | 1105 | 1106 | 1107 | 1108 | 1109 | 1110 | 1111 | 1112 | 1113 | 1114 | 1115 | 1116 | 1117 | 1118 | 1119
 | 1120
 | 1121 | 1122 | 1123

 | 1124 | 1125 | 1126 | 1127 | 1128 | 1129
 | 1130 | |
| CONT'D) | | | | | | | | | | | | | | | | | | |
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| 1965 LAUNCHES (| 1965 12D | 1965 12E | 1965 12F | 5 1 | 5 | 5 1 | 2 | 7 | 7 | 5 | 5 | 5 | 2 | | 5 1 | 1965 12U | 1965 12V | 1965 12W | 1965 12X
 | 5.1
 | 5. | | 1965 12 AB

 | 1965 12AC | 2 | 1965 12AE | 5.1 | 5 1 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | 1965 LAUNCHES (CONT'D) | LAUNCHES (CONT'D) 12D USSR 22 FEB 25 FEB | LAUNCHES (CONT'D) 12D 12D 1101 USSR 22 FEB 26 FEB 12E | LAUNCHES (CONT'D) USSR 22 FEB 25 FEB 12D USSR 22 FEB 26 FEB 12E 1102 USSR 22 FEB 26 FEB 12F 1103 USSR 22 FEB 2 MAR | 5 LAUNCHES (CONT'D) 5 12D 6 12E 7 12B 7 12B 7 12B 7 12B 7 12B 7 12B 7 12B 7 12B 7 12B 7 12B 7 12B 7 12B 7 12B 7 12B 7 12B 7 10 MAR 7 12B 7 10 MAR | 5 LAUNCHES (CONT'D) 1101 USSR 22 FEB 25 FEB 5 12D 1102 USSR 22 FEB 26 FEB 5 12E 1103 USSR 22 FEB 2 MAR 5 12F 1104 USSR 22 FEB 10 MAR 5 12G USSR 22 FEB 25 FEB 5 12H USSR 22 FEB 25 FEB | 5 LAUNCHES (CONT'D) USSR 22 FEB 25 FEB 5 12D USSR 22 FEB 26 FEB 5 12E USSR 22 FEB 26 FEB 5 12F USSR 22 FEB 2 MAR 5 12G USSR 22 FEB 10 MAR 5 12G USSR 22 FEB 25 FEB 5 12H USSR 22 FEB 2 FEB 5 12H USSR 22 FEB 2 MAR | 5 LAUNCHES (CONT'D) USSR 22 FEB 25 FEB 5 12D USSR 22 FEB 26 FEB 5 12E USSR 22 FEB 2 MAR 5 12F USSR 22 FEB 2 MAR 5 12F USSR 22 FEB 10 MAR 5 12H USSR 22 FEB 2 FEB 5 12H USSR 22 FEB 2 MAR 5 12J USSR 22 FEB 2 MAR 5 12K USSR 22 FEB 2 MAR | 5 LAUNCHES (CONT'D) 1101 USSR 22 FEB 25 FEB 5 12D USSR 22 FEB 26 FEB 5 12E 1102 USSR 22 FEB 2 FEB 5 12F 1103 USSR 22 FEB 2 MAR 5 12G USSR 22 FEB 10 MAR 5 12H 1105 USSR 22 FEB 2 MAR 5 12H 1106 USSR 22 FEB 2 MAR 5 12K 1107 USSR 22 FEB 2 MAR 5 12K 1108 USSR 22 FEB 1 MAR | 5 LAUNCHES (CONT¹D) USSR 22 FEB 25 FEB 5 12D USSR 22 FEB 26 FEB 5 12E USSR 22 FEB 2 MAR 5 12E USSR 22 FEB 2 MAR 5 12F USSR 22 FEB 10 MAR 5 12H USSR 22 FEB 25 FEB 5 12H USSR 22 FEB 25 MAR 5 12K USSR 22 FEB 1 MAR 5 12L USSR 22 FEB 1 MAR 5 12L USSR 22 FEB 1 MAR 5 12L USSR 22 FEB 26 FEB | 5 LAUNCHES (CONT'D) USSR 22 FEB 25 FEB 5 12D USSR 22 FEB 26 FEB 5 12E USSR 22 FEB 2 FEB 5 12F USSR 22 FEB 10 MAR 5 12G USSR 22 FEB 10 MAR 5 12G USSR 22 FEB 10 MAR 5 12H USSR 22 FEB 25 MAR 5 12H USSR 22 FEB 25 MAR 5 12L USSR 22 FEB 1 MAR 6 12L USSR 22 FEB 1 MAR 1109 USSR 22 FEB 26 FEB 1109 USSR 22 FEB 27 FEB | 5 LAUNCHES (CONT'D) 1101 USSR 22 FEB 25 FEB 5 12D USSR 22 FEB 26 FEB 5 12E 1102 USSR 22 FEB 2 FEB 5 12F 1103 USSR 22 FEB 2 FEB 5 12G USSR 22 FEB 2 FEB 5 12H USSR 22 FEB 2 FEB 5 12J USSR 22 FEB 2 FEB 5 12L USSR 22 FEB 2 FEB 5 12L USSR 22 FEB 1 MAR 5 12L USSR 22 FEB 1 MAR 5 12L USSR 22 FEB 2 FEB 5 12L USSR 22 FEB 2 FEB 5 12M USSR 2 FEB 2 FEB 5 12M USSR 2 FEB 2 FEB | 5 LAUNCHES (CONT'D) 1101 USSR 22 FEB 25 FEB 5 12D USSR 22 FEB 26 FEB 5 12E 1103 USSR 22 FEB 26 FEB 5 12F 1103 USSR 22 FEB 2 MAR 5 12G USSR 22 FEB 2 MAR 5 12J USSR 22 FEB 2 MAR 5 12L USSR 22 FEB 2 FEB 1109 USSR 22 FEB 2 FEB 1110 USSR 22 FEB 2 MAR 1111 USSR 22 FEB 2 MAR | 5 LAUNCHES (CONT'D) 1101 USSR 22 FEB 25 FEB 5 12D USSR 22 FEB 26 FEB 5 12E 1102 USSR 22 FEB 26 FEB 5 12F 1103 USSR 22 FEB 2 FEB 5 12G USSR 22 FEB 10 MAR 5 12H USSR 22 FEB 25 FEB 5 12J USSR 22 FEB 25 MAR 5 12L USSR 22 FEB 1 MAR 5 12L USSR 22 FEB 25 FEB 1109 USSR 22 FEB 27 FEB 1110 USSR 22 FEB 2 FEB 1111 USSR 22 FEB 1 MAR 1112 USSR 22 FEB 1 MAR 1112 USSR 22 FEB 1 MAR 1112 USSR 22 FEB 1 MAR 1113 USSR 22 FEB 1 MAR 1113 USSR 22 FEB 1 MAR 1113 USSR 22 FEB 1 MAR | 5 LAUNCHES (CONT'D) 1101 USSR 22 FEB 25 FEB 5 12D USSR 22 FEB 26 FEB 5 12E 1102 USSR 22 FEB 26 FEB 5 12F 1103 USSR 22 FEB 2 MAR 5 12F 1104 USSR 22 FEB 2 MAR 5 12J USSR 22 FEB 2 MAR 5 12J USSR 22 FEB 2 MAR 1105 USSR 22 FEB 2 MAR 1109 USSR 22 FEB 27 FEB 1110 USSR 22 FEB 27 FEB 1111 USSR 22 FEB 2 MAR 1112 USSR 22 FEB 2 MAR 1112 USSR 22 FEB 2 FEB 1113 USSR 22 FEB 2 FEB 1114 USSR 22 FEB 3 MAR | 5 LAUNCHES (CONT'D) 1101 USSR 22 FEB 25 FEB 5 12E 1102 USSR 22 FEB 26 FEB 5 12E 1102 USSR 22 FEB 26 FEB 5 12F 1103 USSR 22 FEB 20 MAR 5 12G USSR 22 FEB 25 FEB 25 FEB 5 12J USSR 22 FEB 25 MAR 5 12L USSR 22 FEB 25 MAR 5 12L USSR 22 FEB 25 MAR 5 12L USSR 22 FEB 27 FEB 5 12L USSR 22 FEB 27 FEB 5 12L USSR 22 FEB 27 FEB 5 12R USSR 22 FEB 27 FEB 5 12R USSR 22 FEB 27 FEB 5 12Q USSR 22 FEB 3 MAR 5 12R USSR 22 FEB 3 MAR 6 12R USSR | 5 LAUNCHES (CONT'D) 1101 USSR 22 FEB 25 FEB 5 12E 1102 USSR 22 FEB 26 FEB 5 12E 1103 USSR 22 FEB 26 FEB 5 12E 1103 USSR 22 FEB 20 MAR 5 12G USSR 22 FEB 25 FEB 25 FEB 1 104 USSR 22 FEB 25 MAR 1 105 USSR 22 FEB 25 MAR 1 107 USSR 22 FEB 25 MAR 1 108 USSR 22 FEB 27 FEB 1 110 USSR 22 FEB 27 FEB 1 111 USSR 22 FEB 1 MAR 1 112 USSR 22 FEB 27 FEB 1 113 USSR 22 FEB 27 FEB 1 114 USSR 22 FEB 27 FEB 1 115 USSR 22 FEB 27 FEB 1 115 USSR 22 FEB 4 MAR 1 116 USSR 22 FEB 4 MAR | 5 LAUNCHES (CONT'D) 1101 USSR 22 FEB 25 FEB 5 12D USSR 22 FEB 26 FEB 5 12E 1103 USSR 22 FEB 26 FEB 5 12F 1103 USSR 22 FEB 20 MAR 5 12G 1104 USSR 22 FEB 20 MAR 5 12G 1105 USSR 22 FEB 20 MAR 5 12J 1106 USSR 22 FEB 25 MAR 5 12L 1107 USSR 22 FEB 25 MAR 5 12L 1109 USSR 22 FEB 26 FEB 5 12L 1110 USSR 22 FEB 27 FEB 5 12L 1111 USSR 22 FEB 27 FEB 5 12R 1113 USSR 22 FEB 27 FEB 5 12R 1113 USSR 22 FEB 3 MAR 5 12R 1114 USSR 22 FEB 3 MAR 5 12R 1115 USSR 22 FEB 3 MAR 5 12U 1115 USSR 22 FEB 3 MAR 6 12S 1111 | 5 LAUNCHES (CONT'D) USSR 22 FEB 25 FEB 5 12E 1101 USSR 22 FEB 26 FEB 5 12E 1102 USSR 22 FEB 26 FEB 5 12F 1103 USSR 22 FEB 20 MAR 5 12G 1104 USSR 22 FEB 25 FEB 5 12H USSR 22 FEB 25 MAR 5 12L USSR 22 FEB 25 MAR 5 12L USSR 22 FEB 25 MAR 5 12L USSR 22 FEB 25 FEB 5 12L USSR 22 FEB 27 FEB 5 12L USSR 22 FEB 27 FEB 5 12L USSR 22 FEB 27 FEB 5 12P USSR 22 FEB 27 FEB 5 12R USSR 22 FEB 27 FEB 5 12R USSR 22 FEB 4 MAR 5 12T USSR 22 FEB 4 MAR 5 12V USSR 22 FEB 4 MAR 5 12V < | 5 LAUNCHES (CONT'D) 1101 USSR 22 FEB 25 FEB 5 12E 1102 USSR 22 FEB 26 FEB 5 12E 1103 USSR 22 FEB 26 FEB 5 12C 1104 USSR 22 FEB 20 MAR 5 12C 1104 USSR 22 FEB 25 MAR 5 12J 1105 USSR 22 FEB 25 MAR 5 12L 1106 USSR 22 FEB 25 MAR 5 12L 1109 USSR 22 FEB 25 MAR 5 12L 1109 USSR 22 FEB 27 MAR 5 12L 1110 USSR 22 FEB 27 FEB 5 12L 1111 USSR 22 FEB 27 FEB 5 12R 1112 USSR 22 FEB 27 FEB 5 12R 1114 USSR 22 FEB 27 FEB 5 12R 1114 USSR 22 FEB 27 FEB 5 12V 1116 USSR 22 FEB 27 MAR <td< td=""><td>5 LAUNCHES (CONT¹D) USSR 22 FEB 25 FEB 5 12D 1101 USSR 22 FEB 26 FEB 5 12E 1102 USSR 22 FEB 26 FEB 5 12F 1103 USSR 22 FEB 2 MAR 5 12G 1104 USSR 22 FEB 2 MAR 5 12J 1106 USSR 22 FEB 2 MAR 5 12L 1107 USSR 22 FEB 2 MAR 5 12L 1109 USSR 22 FEB 2 MAR 5 12L 1109 USSR 22 FEB 2 MAR 5 12L 1110 USSR 22 FEB 2 MAR 5 12R 1111 USSR 22 FEB 2 MAR 5 12R 1111 USSR 22 FEB 2 MAR 5 12R 1114 USSR 22 FEB 2 MAR 5 12R 1114 USSR 22 FEB 4 MAR 5 12U 1114 USSR 22 FEB 4 MAR 5 12V 1118</td><td>5 LAUNCHES (CONT'D) 1101 USSR 22 FEB 25 FEB 5 12D 1102 USSR 22 FEB 26 FEB 5 12E 1102 USSR 22 FEB 26 FEB 5 12E 1104 USSR 22 FEB 2 MAR 5 12H 1104 USSR 22 FEB 2 MAR 5 12L 1105 USSR 22 FEB 2 MAR 5 12L 1107 USSR 22 FEB 2 MAR 5 12L 1108 USSR 22 FEB 2 MAR 5 12L 1109 USSR 22 FEB 2 MAR 5 12L 1109 USSR 22 FEB 2 MAR 5 12P 1110 USSR 22 FEB 2 MAR 5 12P 1113 USSR 22 FEB 2 MAR 5 12V 1114 USSR 22 FEB 2 MAR 5 12V 1114 USSR 22 FEB 2 MAR 5 12V 1110 USSR 22 FEB 2 MAR 5 12V</td><td>5 LAUNCHES (CONT'D) USSR 22 FEB 25 FEB 5 12D USSR 22 FEB 26 FEB 5 12E 1102 USSR 22 FEB 26 FEB 5 12F 1104 USSR 22 FEB 26 FEB 5 12G 1104 USSR 22 FEB 28 MAR 5 12J 1106 USSR 22 FEB 28 MAR 5 12L 1107 USSR 22 FEB 28 MAR 5 12L 1109 USSR 22 FEB 28 MAR 5 12L 1109 USSR 22 FEB 28 MAR 5 12L 1110 USSR 22 FEB 27 FEB 5 12N 1111 USSR 22 FEB 28 MAR 5 12R 1113 USSR 22 FEB 27 FEB 5 12R 1114 USSR 22 FEB 27 FEB 5 12R 1115 USSR 22 FEB 27 FEB 5 12R 1116 USSR 22 FEB 27 FEB 5 12R 1118 <t< td=""><td>5 LAUNCHES (CONT'D) 1101 USSR 22 FEB 25 FEB 5 12D 1102 USSR 22 FEB 26 FEB 5 12E 1103 USSR 22 FEB 26 FEB 5 12F 1104 USSR 22 FEB 26 FEB 5 12H 1105 USSR 22 FEB 25 FEB 5 12H 1106 USSR 22 FEB 25 FEB 5 12L 1106 USSR 22 FEB 25 FEB 5 12L 1109 USSR 22 FEB 25 FEB 5 12L 1109 USSR 22 FEB 26 FEB 5 12N 1110 USSR 22 FEB 27 FEB 5 12N 1111 USSR 22 FEB 27 FEB 5 12N 1112 USSR 22 FEB 27 FEB 5 12N 1114 USSR 22 FEB 27 FEB 5 12N 1114 USSR 22 FEB 2 MAR 5 12N 1110 USSR 22 FEB 2 MAR 6</td><td>5 LAUNCHES (CONT'D) 1101 USSR 22 FEB 25 FEB 5 12E 1102 USSR 22 FEB 26 FEB 5 12E 1103 USSR 22 FEB 26 FEB 5 12F 1104 USSR 22 FEB 10 MAR 5 12H 1105 USSR 22 FEB 25 FEB 5 12H 1106 USSR 22 FEB 25 FEB 5 12L 1106 USSR 22 FEB 25 FEB 5 12L 1109 USSR 22 FEB 25 FEB 5 12L 1109 USSR 22 FEB 26 FEB 5 12M 1110 USSR 22 FEB 27 FEB 5 12M 1111 USSR 22 FEB 27 FEB 5 12R 1111 USSR 22 FEB 2 MAR 5 12R 1114 USSR 22 FEB 2 MAR 5 12R 1118 USSR 22 FEB 2 MAR 5 12V 1119 USSR 22 FEB 2 MAR 5 1</td><td> 1101 USSR 22 FEB 26 FEB 1102 USSR 22 FEB 26 FEB 1103 USSR 22 FEB 26 FEB 1104 USSR 22 FEB 2 MAR 1105 USSR 22 FEB 2 MAR 1105 USSR 22 FEB 2 MAR 1105 USSR 22 FEB 25 MAR 1105 USSR 22 FEB 25 MAR 1107 USSR 22 FEB 25 MAR 1108 USSR 22 FEB 25 MAR 1109 USSR 22 FEB 2 MAR 1109 USSR 22 FEB 2 MAR 1110 USSR 22 FEB 2 MAR 1111 USSR 22 FEB 1 MAR 1111 USSR 22 FEB 1 MAR 1111 USSR 22 FEB 1 MAR 1120 USSR 22 FEB 1 MAR 1120 USSR 22 FEB 1 MAR 1121 USSR 22 FEB 2 MAR 1121 USSR 22 FEB 2 MAR 1121 USSR 22 FEB 2 MAR 1124 USSR 22 FEB 2 MAR 1244 USSR 22 FEB 2 MAR 22 F</td><td> 1101 USSR 22 FEB 25 FEB 1102 USSR 22 FEB 26 FEB 1103 USSR 22 FEB 2 MAR 1104 USSR 22 FEB 2 MAR 1104 USSR 22 FEB 2 MAR 1104 USSR 22 FEB 2 MAR 1105 USSR 22 FEB 25 MAR 1106 USSR 22 FEB 25 MAR 22 FEB 25 MAR 1106 USSR 22 FEB 25 MAR 22 FEB 25 MA</td><td>5 LAUNCHES (CONT'D) 1101 USSR 22 FEB 25 FEB 5 12E 1102 USSR 22 FEB 26 FEB 5 12E 1103 USSR 22 FEB 2 MAR 5 12E 1104 USSR 22 FEB 2 MAR 5 12C 1104 USSR 22 FEB 2 MAR 5 12L 1105 USSR 22 FEB 2 MAR 5 12L 1107 USSR 22 FEB 2 MAR 5 12L 1107 USSR 22 FEB 2 MAR 5 12L 1109 USSR 22 FEB 2 MAR 5 12M 1110 USSR 22 FEB 2 MAR 5 12P 1111 USSR 22 FEB 2 MAR 5 12P 1111 USSR 22 FEB 2 MAR 5 12P 1114 USSR 22 FEB 2 MAR 5 12P 1114 USSR 22 FEB 2 MAR 5 12P 1114 USSR 22 FEB 2 MAR 5 12A</td><td>LAUNCHES (CONT'D) 1101 USSR 22 FEB 25 FEB 12D 1102 USSR 22 FEB 26 FEB 12D 1103 USSR 22 FEB 26 FEB 12E 1103 USSR 22 FEB 2 MAR 12D 1104 USSR 22 FEB 2 MAR 12L 1105 USSR 22 FEB 2 MAR 12L 1107 USSR 22 FEB 2 MAR 12L 1107 USSR 22 FEB 2 MAR 12L 1109 USSR 22 FEB 2 MAR 12P 1110 USSR 22 FEB 2 MAR 12P 1111 USSR 22 FEB 2 MAR 12P 1112 USSR 22 FEB 2 MAR 12P 1113 USSR 22 FEB 2 MAR 12P 1114 USSR 22 FEB 2 MAR 12P 112P USSR 22 FEB 2 MAR 12A 112A <t< td=""><td>LAUNCHES (CONT'D) 1101 USSR 22 FEB 25 FEB 26 FEB 26 FEB 26 FEB 26 FEB 26 FEB 26 FEB 26 FEB 26 FEB 27 FEB 27 FEB 28 FEB</td><td>LAUNCHES (CONT'D) 1101 USSR 22 FEB 25 12D 1102 USSR 22 FEB 26 12E 1103 USSR 22 FEB 26 12C 1104 USSR 22 FEB 26 12C 1105 USSR 22 FEB 26 12L 1106 USSR 22 FEB 27 12L 1107 USSR 22 FEB 27 12L 1109 USSR 22 FEB 27 12P 1110 USSR 22 FEB 27 12P 1111 USSR 22 FEB 27 12P 112P USSR 22 FEB 27 12A 112A USSR 22 FEB</td></t<></td></t<></td></td<> | 5 LAUNCHES (CONT¹D) USSR 22 FEB 25 FEB 5 12D 1101 USSR 22 FEB 26 FEB 5 12E 1102 USSR 22 FEB 26 FEB 5 12F 1103 USSR 22 FEB 2 MAR 5 12G 1104 USSR 22 FEB 2 MAR 5 12J 1106 USSR 22 FEB 2 MAR 5 12L 1107 USSR 22 FEB 2 MAR 5 12L 1109 USSR 22 FEB 2 MAR 5 12L 1109 USSR 22 FEB 2 MAR 5 12L 1110 USSR 22 FEB 2 MAR 5 12R 1111 USSR 22 FEB 2 MAR 5 12R 1111 USSR 22 FEB 2 MAR 5 12R 1114 USSR 22 FEB 2 MAR 5 12R 1114 USSR 22 FEB 4 MAR 5 12U 1114 USSR 22 FEB 4 MAR 5 12V 1118 | 5 LAUNCHES (CONT'D) 1101 USSR 22 FEB 25 FEB 5 12D 1102 USSR 22 FEB 26 FEB 5 12E 1102 USSR 22 FEB 26 FEB 5 12E 1104 USSR 22 FEB 2 MAR 5 12H 1104 USSR 22 FEB 2 MAR 5 12L 1105 USSR 22 FEB 2 MAR 5 12L 1107 USSR 22 FEB 2 MAR 5 12L 1108 USSR 22 FEB 2 MAR 5 12L 1109 USSR 22 FEB 2 MAR 5 12L 1109 USSR 22 FEB 2 MAR 5 12P 1110 USSR 22 FEB 2 MAR 5 12P 1113 USSR 22 FEB 2 MAR 5 12V 1114 USSR 22 FEB 2 MAR 5 12V 1114 USSR 22 FEB 2 MAR 5 12V 1110 USSR 22 FEB 2 MAR 5 12V | 5 LAUNCHES (CONT'D) USSR 22 FEB 25 FEB 5 12D USSR 22 FEB 26 FEB 5 12E 1102 USSR 22 FEB 26 FEB 5 12F 1104 USSR 22 FEB 26 FEB 5 12G 1104 USSR 22 FEB 28 MAR 5 12J 1106 USSR 22 FEB 28 MAR 5 12L 1107 USSR 22 FEB 28 MAR 5 12L 1109 USSR 22 FEB 28 MAR 5 12L 1109 USSR 22 FEB 28 MAR 5 12L 1110 USSR 22 FEB 27 FEB 5 12N 1111 USSR 22 FEB 28 MAR 5 12R 1113 USSR 22 FEB 27 FEB 5 12R 1114 USSR 22 FEB 27 FEB 5 12R 1115 USSR 22 FEB 27 FEB 5 12R 1116 USSR 22 FEB 27 FEB 5 12R 1118 <t< td=""><td>5 LAUNCHES (CONT'D) 1101 USSR 22 FEB 25 FEB 5 12D 1102 USSR 22 FEB 26 FEB 5 12E 1103 USSR 22 FEB 26 FEB 5 12F 1104 USSR 22 FEB 26 FEB 5 12H 1105 USSR 22 FEB 25 FEB 5 12H 1106 USSR 22 FEB 25 FEB 5 12L 1106 USSR 22 FEB 25 FEB 5 12L 1109 USSR 22 FEB 25 FEB 5 12L 1109 USSR 22 FEB 26 FEB 5 12N 1110 USSR 22 FEB 27 FEB 5 12N 1111 USSR 22 FEB 27 FEB 5 12N 1112 USSR 22 FEB 27 FEB 5 12N 1114 USSR 22 FEB 27 FEB 5 12N 1114 USSR 22 FEB 2 MAR 5 12N 1110 USSR 22 FEB 2 MAR 6</td><td>5 LAUNCHES (CONT'D) 1101 USSR 22 FEB 25 FEB 5 12E 1102 USSR 22 FEB 26 FEB 5 12E 1103 USSR 22 FEB 26 FEB 5 12F 1104 USSR 22 FEB 10 MAR 5 12H 1105 USSR 22 FEB 25 FEB 5 12H 1106 USSR 22 FEB 25 FEB 5 12L 1106 USSR 22 FEB 25 FEB 5 12L 1109 USSR 22 FEB 25 FEB 5 12L 1109 USSR 22 FEB 26 FEB 5 12M 1110 USSR 22 FEB 27 FEB 5 12M 1111 USSR 22 FEB 27 FEB 5 12R 1111 USSR 22 FEB 2 MAR 5 12R 1114 USSR 22 FEB 2 MAR 5 12R 1118 USSR 22 FEB 2 MAR 5 12V 1119 USSR 22 FEB 2 MAR 5 1</td><td> 1101 USSR 22 FEB 26 FEB 1102 USSR 22 FEB 26 FEB 1103 USSR 22 FEB 26 FEB 1104 USSR 22 FEB 2 MAR 1105 USSR 22 FEB 2 MAR 1105 USSR 22 FEB 2 MAR 1105 USSR 22 FEB 25 MAR 1105 USSR 22 FEB 25 MAR 1107 USSR 22 FEB 25 MAR 1108 USSR 22 FEB 25 MAR 1109 USSR 22 FEB 2 MAR 1109 USSR 22 FEB 2 MAR 1110 USSR 22 FEB 2 MAR 1111 USSR 22 FEB 1 MAR 1111 USSR 22 FEB 1 MAR 1111 USSR 22 FEB 1 MAR 1120 USSR 22 FEB 1 MAR 1120 USSR 22 FEB 1 MAR 1121 USSR 22 FEB 2 MAR 1121 USSR 22 FEB 2 MAR 1121 USSR 22 FEB 2 MAR 1124 USSR 22 FEB 2 MAR 1244 USSR 22 FEB 2 MAR 22 F</td><td> 1101 USSR 22 FEB 25 FEB 1102 USSR 22 FEB 26 FEB 1103 USSR 22 FEB 2 MAR 1104 USSR 22 FEB 2 MAR 1104 USSR 22 FEB 2 MAR 1104 USSR 22 FEB 2 MAR 1105 USSR 22 FEB 25 MAR 1106 USSR 22 FEB 25 MAR 22 FEB 25 MAR 1106 USSR 22 FEB 25 MAR 22 FEB 25 MA</td><td>5 LAUNCHES (CONT'D) 1101 USSR 22 FEB 25 FEB 5 12E 1102 USSR 22 FEB 26 FEB 5 12E 1103 USSR 22 FEB 2 MAR 5 12E 1104 USSR 22 FEB 2 MAR 5 12C 1104 USSR 22 FEB 2 MAR 5 12L 1105 USSR 22 FEB 2 MAR 5 12L 1107 USSR 22 FEB 2 MAR 5 12L 1107 USSR 22 FEB 2 MAR 5 12L 1109 USSR 22 FEB 2 MAR 5 12M 1110 USSR 22 FEB 2 MAR 5 12P 1111 USSR 22 FEB 2 MAR 5 12P 1111 USSR 22 FEB 2 MAR 5 12P 1114 USSR 22 FEB 2 MAR 5 12P 1114 USSR 22 FEB 2 MAR 5 12P 1114 USSR 22 FEB 2 MAR 5 12A</td><td>LAUNCHES (CONT'D) 1101 USSR 22 FEB 25 FEB 12D 1102 USSR 22 FEB 26 FEB 12D 1103 USSR 22 FEB 26 FEB 12E 1103 USSR 22 FEB 2 MAR 12D 1104 USSR 22 FEB 2 MAR 12L 1105 USSR 22 FEB 2 MAR 12L 1107 USSR 22 FEB 2 MAR 12L 1107 USSR 22 FEB 2 MAR 12L 1109 USSR 22 FEB 2 MAR 12P 1110 USSR 22 FEB 2 MAR 12P 1111 USSR 22 FEB 2 MAR 12P 1112 USSR 22 FEB 2 MAR 12P 1113 USSR 22 FEB 2 MAR 12P 1114 USSR 22 FEB 2 MAR 12P 112P USSR 22 FEB 2 MAR 12A 112A <t< td=""><td>LAUNCHES (CONT'D) 1101 USSR 22 FEB 25 FEB 26 FEB 26 FEB 26 FEB 26 FEB 26 FEB 26 FEB 26 FEB 26 FEB 27 FEB 27 FEB 28 FEB</td><td>LAUNCHES (CONT'D) 1101 USSR 22 FEB 25 12D 1102 USSR 22 FEB 26 12E 1103 USSR 22 FEB 26 12C 1104 USSR 22 FEB 26 12C 1105 USSR 22 FEB 26 12L 1106 USSR 22 FEB 27 12L 1107 USSR 22 FEB 27 12L 1109 USSR 22 FEB 27 12P 1110 USSR 22 FEB 27 12P 1111 USSR 22 FEB 27 12P 112P USSR 22 FEB 27 12A 112A USSR 22 FEB</td></t<></td></t<> | 5 LAUNCHES (CONT'D) 1101 USSR 22 FEB 25 FEB 5 12D 1102 USSR 22 FEB 26 FEB 5 12E 1103 USSR 22 FEB 26 FEB 5 12F 1104 USSR 22 FEB 26 FEB 5 12H 1105 USSR 22 FEB 25 FEB 5 12H 1106 USSR 22 FEB 25 FEB 5 12L 1106 USSR 22 FEB 25 FEB 5 12L 1109 USSR 22 FEB 25 FEB 5 12L 1109 USSR 22 FEB 26 FEB 5 12N 1110 USSR 22 FEB 27 FEB 5 12N 1111 USSR 22 FEB 27 FEB 5 12N 1112 USSR 22 FEB 27 FEB 5 12N 1114 USSR 22 FEB 27 FEB 5 12N 1114 USSR 22 FEB 2 MAR 5 12N 1110 USSR 22 FEB 2 MAR 6 | 5 LAUNCHES (CONT'D) 1101 USSR 22 FEB 25 FEB 5 12E 1102 USSR 22 FEB 26 FEB 5 12E 1103 USSR 22 FEB 26 FEB 5 12F 1104 USSR 22 FEB 10 MAR 5 12H 1105 USSR 22 FEB 25 FEB 5 12H 1106 USSR 22 FEB 25 FEB 5 12L 1106 USSR 22 FEB 25 FEB 5 12L 1109 USSR 22 FEB 25 FEB 5 12L 1109 USSR 22 FEB 26 FEB 5 12M 1110 USSR 22 FEB 27 FEB 5 12M 1111 USSR 22 FEB 27 FEB 5 12R 1111 USSR 22 FEB 2 MAR 5 12R 1114 USSR 22 FEB 2 MAR 5 12R 1118 USSR 22 FEB 2 MAR 5 12V 1119 USSR 22 FEB 2 MAR 5 1 | 1101 USSR 22 FEB 26 FEB 1102 USSR 22 FEB 26 FEB 1103 USSR 22 FEB 26 FEB 1104 USSR 22 FEB 2 MAR 1105 USSR 22 FEB 2 MAR 1105 USSR 22 FEB 2 MAR 1105 USSR 22 FEB 25 MAR 1105 USSR 22 FEB 25 MAR 1107 USSR 22 FEB 25 MAR 1108 USSR 22 FEB 25 MAR 1109 USSR 22 FEB 2 MAR 1109 USSR 22 FEB 2 MAR 1110 USSR 22 FEB 2 MAR 1111 USSR 22 FEB 1 MAR 1111 USSR 22 FEB 1 MAR 1111 USSR 22 FEB 1 MAR 1120 USSR 22 FEB 1 MAR 1120 USSR 22 FEB 1 MAR 1121 USSR 22 FEB 2 MAR 1121 USSR 22 FEB 2 MAR 1121 USSR 22 FEB 2 MAR 1124 USSR 22 FEB 2 MAR 1244 USSR 22 FEB 2 MAR 22 F | 1101 USSR 22 FEB 25 FEB 1102 USSR 22 FEB 26 FEB 1103 USSR 22 FEB 2 MAR 1104 USSR 22 FEB 2 MAR 1104 USSR 22 FEB 2 MAR 1104 USSR 22 FEB 2 MAR 1105 USSR 22 FEB 25 MAR 1106 USSR 22 FEB 25 MAR 22 FEB 25 MAR 1106 USSR 22 FEB 25 MAR 22 FEB 25 MA | 5 LAUNCHES (CONT'D) 1101 USSR 22 FEB 25 FEB 5 12E 1102 USSR 22 FEB 26 FEB 5 12E 1103 USSR 22 FEB 2 MAR 5 12E 1104 USSR 22 FEB 2 MAR 5 12C 1104 USSR 22 FEB 2 MAR 5 12L 1105 USSR 22 FEB 2 MAR 5 12L 1107 USSR 22 FEB 2 MAR 5 12L 1107 USSR 22 FEB 2 MAR 5 12L 1109 USSR 22 FEB 2 MAR 5 12M 1110 USSR 22 FEB 2 MAR 5 12P 1111 USSR 22 FEB 2 MAR 5 12P 1111 USSR 22 FEB 2 MAR 5 12P 1114 USSR 22 FEB 2 MAR 5 12P 1114 USSR 22 FEB 2 MAR 5 12P 1114 USSR 22 FEB 2 MAR 5 12A | LAUNCHES (CONT'D) 1101 USSR 22 FEB 25 FEB 12D 1102 USSR 22 FEB 26 FEB 12D 1103 USSR 22 FEB 26 FEB 12E 1103 USSR 22 FEB 2 MAR 12D 1104 USSR 22 FEB 2 MAR 12L 1105 USSR 22 FEB 2 MAR 12L 1107 USSR 22 FEB 2 MAR 12L 1107 USSR 22 FEB 2 MAR 12L 1109 USSR 22 FEB 2 MAR 12P 1110 USSR 22 FEB 2 MAR 12P 1111 USSR 22 FEB 2 MAR 12P 1112 USSR 22 FEB 2 MAR 12P 1113 USSR 22 FEB 2 MAR 12P 1114 USSR 22 FEB 2 MAR 12P 112P USSR 22 FEB 2 MAR 12A 112A <t< td=""><td>LAUNCHES (CONT'D) 1101 USSR 22 FEB 25 FEB 26 FEB 26 FEB 26 FEB 26 FEB 26 FEB 26 FEB 26 FEB 26 FEB 27 FEB 27 FEB 28 FEB</td><td>LAUNCHES (CONT'D) 1101 USSR 22 FEB 25 12D 1102 USSR 22 FEB 26 12E 1103 USSR 22 FEB 26 12C 1104 USSR 22 FEB 26 12C 1105 USSR 22 FEB 26 12L 1106 USSR 22 FEB 27 12L 1107 USSR 22 FEB 27 12L 1109 USSR 22 FEB 27 12P 1110 USSR 22 FEB 27 12P 1111 USSR 22 FEB 27 12P 112P USSR 22 FEB 27 12A 112A USSR 22 FEB</td></t<> | LAUNCHES (CONT'D) 1101 USSR 22 FEB 25 FEB 26 FEB 26 FEB 26 FEB 26 FEB 26 FEB 26 FEB 26 FEB 26 FEB 27 FEB 27 FEB 28 FEB | LAUNCHES (CONT'D) 1101 USSR 22 FEB 25 12D 1102 USSR 22 FEB 26 12E 1103 USSR 22 FEB 26 12C 1104 USSR 22 FEB 26 12C 1105 USSR 22 FEB 26 12L 1106 USSR 22 FEB 27 12L 1107 USSR 22 FEB 27 12L 1109 USSR 22 FEB 27 12P 1110 USSR 22 FEB 27 12P 1111 USSR 22 FEB 27 12P 112P USSR 22 FEB 27 12A 112A USSR 22 FEB |

DECAY		18 MAR 65	13 MAR 65	4 MAR 65	18 MAR 65	4 MAR 65	5 MAR 65	25 MAR 65	5 MAR 65	13 MAR 65	9 MAR 65	7 MAR 65	20 MAR 65	6 MAR 65	5 MAR 65	4 MAR 65	5 MAR 65	5 MAR 65	4 MAR 65	22 MAR 65		5 MAR 65	27 MAR 65	5 MAR 65	16 MAR 65	4 MAR 65
LAUNCH		22 FEB	22 FEB	22 FEB	22 FEB	2	22 FEB	Ų	22 FEB				22 FEB			22 FEB										
SOURCE		USSR																								
CATALOGUE		1156	1157	1158	1159	1160	1161	1162	1163	1164	1165	1166	1167	1168	1169	1170	1171	1172	1173	1174	1175	1176	1177	1178	1179	1180
CODE NAME	(CONT'D)																									
OBJECT	1965 LAUNCHES (1965 12BL	1965 12BM	1965 12BN	1965 12BP	1965 12BQ	1965 12BR	1965 12BS	1965 12BT	1965 12BU	1965 12BV	1965 12BW	1965 12BX	1965 12BY	1965 12BZ	1965 12CA	1965 12CB	1965 12CC	1965 12CD	1965 12CE	1965 12CF	1965 12CG	1965 12CH	1965 12CJ	1965 12CK	1965 12CL

OBJECT	CODE NAME	CATALOGUE	SOURCE	LAUNCH	DECAY
1965 LAUNCHES (CONT'D)	(CONT'D)				
1965 12CM		1181	USSR	22 FEB	6 MAR 65
1965 12CN		1182	USSR	22 FEB	7 MAR 65
		1183	USSR	22 FEB	8 MAR 65
50		1184	USSR	22 FEB	7 MAR 65
ιn		1185	USSR	22 FEB	11 MAR 65
		1186	USSR	22 FEB	1 MAR 65
٠ıハ		1187	USSR	22 FEB	1 MAR 65
'n		1188	USSR	22 FEB	1 MAR 65
5.		1189	USSR	22 FEB	
5 1		1190	USSR	22 FEB	
1965 12CX		1194	USSR	22 FEB	16 MAR 65
1965 12CY		1195	USSR		9 MAR 65
1965 12CZ		1196	USSR		MAR
1965 12DA		1197	USSR	22 FEB	MAR
1965 12DB		1198	USSR	22 FEB	
1965 12DC		1199	USSR	22 FEB	
1965 12DD		1200	USSR	22 FEB	MAR
1965 12DE		1201	USSR	22 FEB	
1965 12DF		1202	USSR	22 FEB	9 MAR 65
		1203	USSR	22 FEB	
5 1		1204	USSR	22 FEB	15 MAR 65
1965 12W		1205	USSR	22 FEB	
1965 12DK		1206	USSR	22 FEB	9 MAR 65
1965 12DL		1209	USSR	22 FEB	11 MAR 65
1965 12DM		1210	USSR	22 FEB	4 MAR 65

CATALOGUE NUMBER 1211 1212 1213 1214 1215 1216 1219 1220 1221 1222 1222 1222 1223 1224 1223 1223	SOURCE LAUNCH DECAY	22 FEB 16 MAR	22 FEB 12 MAR	22 FEB 14	22 FEB 20 MAR	22 FEB 16	22 FEB 17 MAR	22 FEB 28 MAR	22 FEB 20 MAR	22 FEB 14 MAR	22 FEB 12 MAR	22 FEB 18 MAR	22 FEB 12 MAR	22 FEB 31 MAR	22 FEB 16 MAR	22 FEB 14 MAR	22 FEB 18 MAR	22 FEB 11 MAR	22 FEB 29	22 FEB 13 MAR	22 FEB 17 MAR	22 FEB 24 MAR	22 FEB 20 MAR	22 FEB 20 MAR 6	tra co
		1211 USSR																						1234 USSR	
LAUN LAUN 12DP 12DP 12DP 12DP 12DP 12DV	2	~	م	ζ,	~	S	I	D	>	73	× :	12DY	73	4	ď	O	2ED	(r)	Ēr•	r 9	·		~	. 7	-

OBJECT	CODE NAME	CATALOGUE	SOURCE	LAUNCH	DECAY
1965 LAUNCHES (CONT'D)	(CONT'D)				
1965 12EP		1237	USSR		20 MAR 65
1.965 12EQ		1238	USSR	22 FEB	17 MAR 65
1.965 12ER		1239	USSR		MAR 6
1.965 12ES		1240	USSR		MAR 6
1965 12ET		1241	USSR		MAR 6
1.965 12EU		1242	USSR		MAR 6
1965 12EV		1243	USSR		MAR 6
1965 12EW		1254	USSR	22 FEB	MAR
1965 12EX		1255	USSR		MAR 6
5.1		1256	USSR		MAR 6
1965 12EZ		1257	USSR		MAR 6
1965 12FA		1258	USSR		MAR 6
1.965 12FB		1261	USSR		APR 6
1.965 12FC		1262	USSR		
1965 12FD		1263	USSR		MAR 6
1965 12FE		1264	USSR		MAR
1965 12FF		1265	USSR		MAR 6
1965 12FG		1266	USSR		MAR
1965 12FH		1275	USSR		21 MAR 65
1.965 12FJ		1276	USSR		MAR 6
1965 12FK		1277	USSR		MAR 6
1965 12FL		1278	USSR		
1965 12FM		1279	USSR		MAR 6
1.965 12FN		1280	USSR	22 FEB	24 MAR 65
1965 12FP		1281	USSR	22 FEB	19 MAR 65

DECAY		21 MAR 65	23 MAR 65	19 MAR 65	20 MAR 65	15 MAR 65	22 MAR 65	20 MAR 65	MAR	MAR	MAR	MAR	10-11 MAR 65	MAR		MAR		1 AUG 65			23 DEC 65	17 MAR		15 MAR 65			21 MAR 65	19 DEC 65	30 JAN 66
LAUNCH		22 FEB	22 FEB				22 FEB		22 FEB				25 FEB			7 MAR	11 MAR	11 MAR	11 MAR	11 MAR	11 MAR				12 MAR		12 MAR		15 MAR
SOURCE		USSR	USSR	USSR	Sn	SN	USSR	USSR	USSR	Sn	Sn	SN	Sn	Sn	USSR	USSR	USSR	SN	ns	ns	USSR	USSR							
CATALOGUE		1282	1283	1284	1295	1296	1297	1 2 9 9	1300	1304	1309	1096	1193	1191	1192	1207	1303	1251	1249	1319	1323	1246	1252	1253	1247	1259	1260	1350	1353
CODE NAME	LAUNCHES (CONT'D)													COSMOS 59								COSMOS 60							
OBJECT	1965 LAUNCHE	1965 12FQ	1965 12FR	1965 12FS	1965 12FT	1965 12FU			1965 12FX		1965 12FZ	1965 13A			1965 15B	10	Ŋ	1965 17E		1965 17G	1965 17Н	'n	1965 18B	1965 18C	1965 19A	1965 19B	1965 19C	Ś	1965 20Y

OBJECT	CODE NAME	CATALOGUE	SOURCE	LAUNCH	DECAY	
1965 LAUNCHES (CONT'D)	(CONT'D)					
1965 20AB		1356	USSR	15 MAR	14 AUG 65	
1965 20AG		1375	USSR	15 MAR	14 OCT 65	
		1400	USSR	15 MAR	5 OCT 65	
		1401	USSR	15 MAR	20 MAR 66	
		1403	USSR	15 MAR	3 DEC 65	
1965 20AT		1417	USSR	15 MAR		
1965 20AU		1418	USSR	15 MAR	AUG	
1965 20AX		1437	USSR	15 MAR		
1965 20AV		1419	USSR	15 MAR		
1965 20BG		1482	USSR	15 MAR	JAN	
1965 20BQ		1490	USSR		JAN	
		1492	USSR	15 MAR	NOV	
1965 20BU		1494	USSR	15 MAR	SEP	
		1532	USSR		JAN	
1965 20CD		1533	USSR	15 MAR	DEC	
1965 20CF		1535	USSR	15 MAR	14 DEC 65	
1965 20CM		1541	USSR			
1965 20CR		1545	USSR		JAN	٠
1965 20DG		1560	USSR	15 MAR		
1965 20W		1562	USSR		FEB	
1965 21B		1288	Sn			
1965 21D		1290	Sn	18 MAR		
1965 22A	VOSKHOD 2	1274	USSR	18 MAR	19 MAR 65	
1965 22B		1285	USSR	18 MAR	27 MAR 65	
1965 22C		1286	USSR	18 MAR	25 MAR 65	
1965 22D		1287	USSR	18 MAR		
1965 23A	RANGER 9	1294	SO	21 MAR	24 MAR 65	
1965 24A	GT-3	1301	ns	23 MAR	23 MAR 65 ***	*****

DECAY		SA MAR AC	2 APR 65	4 APR 65			APR	6 MAY 65	APR		JUL			APR		MAY	MAR	MAY	JUN	MAY		MAY	MAY	MAY	MAY		JUN	JUN			30-31 MAY 65
LAUNCH		23 MAR	25 MAR	25 MAR			17 APR	17 APR										29 APR			7 MAY	7 MAY	7 MAY	9 MAY							25 MAY
SOURCE		SI	USSR	USSR	USSR	Sn	USSR	USSR	USSR	USSR	USSR	ns	Sn	Sn	NS	Sn	NS	US	OS	USSR	USSR	USSR	USSR	USSR	USSR	USSR	CO	M	USSR	USSR	USSR
CATALOGUE NUMBER		1302	1305	1306	1308	1307	1320	1321	1322	1325	1326	1327	1331	1332	1333	1334	1357	1330	1367	1362	1363	1364	1365	1366	1368	1369	1374	1415	1382	1383	1384
CODE NAME	(CONT'D)		COSMOS 64				COSMOS 65	ROCKET BODY			ROCKET BODY									COSMOS 66				LUNIK 5					COSMOS 67	ROCKET BODY	
OBJECT	1965 LAUNCHES (CONT'D)	1965 24B			ın										1965 31E						1965 35B										1965 400

DECAY		30-31 MAY 65	1 JUN 65	7 JUN 65*****		12 JUN 65							NOC	NOC	29 JUN 65				JUN	30 JUN 65	JUN	NOV	AUG	OCT	SEP		JUL	MAR	JUL	JUL		
LAUNCH		25 MAY	27 MAY	3 JUN	S JUN	NUL 8	NUL 8	NUL 6	NOL 6			15 JUN		-		18 JUN	25 JUN	25 JUN	_	25 JUN		_		-	-	_	•	-	-	•	19 JUL	
SOURCE		USSR	US	SD	SO	USSR	USSR	ns	SN	USSR	USSR	USSR	USSR	USSR	us	US	USSR	USSR	USSR	Sn	Sn	US	USSR	USSR	USSR	USSR	USSR	SD.	USSR	USSR	us	
CATALOGUE		1387	1386	1390	1391	1394	1395	1396	1414	1404	1405	1406	1407	1408	1412	1413	1421	1423	1429	1424	1426	1427	1434	1466	1451	1450	1446	1745	1453	1456	1457	
CODE NAME	(CONT'D)			GT-4	ROCKET BODY					COSMOS 68							COSMOS 69							PROTON 1								
OBJECT	1965 LAUNCHES (CONT'D)	1965 40D	1965 41A	1965 43A	1965 43B	1965 44B	1965 44C		1965 45B			1965 46C			1965 47A	1965 47B	1965 49A				1965 50C		1965 52C				1965 54D		1965 56B	1965 56C	1965 57A	

OBJECT	CODE NAME	CATALOGUE	SOURCE	LAUNCH	DECAY
1965 LAUNCHES (CONT'D)	(CONT'D)				
1965 59A	COSMOS 76	1464	USSR	23 JUL	16 MAR 66
1965 59B		1465	USSR	23 JUL	4 DEC 65
1965 61A	COSMOS 77	1469	USSR	3 AUG	11 AUG 65
1965 61B		1470	USSR	3 AUG	
		1471	Sn	3 AUG	7 AUG 65
1965 62C		1474	Sn	3 AUG	
	COSMOS 78	1505	USSR	14 AUG	
1965 66B		1507	USSR	14 AUG	
		1509	USSR	14 AUG	
1965 67A		1513	ûS	17 AUG	
	GT-5	1516	ns	21 AUG	AUG
		1518	ns	21 AUG	
		1519	ūS	21 AUG	
1965 69A	COSMOS 79	1523	USSR	25 AUG	7 SEP 65
		1524	USSR	25 AUG	
		1525	USSR	25 AUG	
1965 69D		1526	USSR	25 AUG	
1965 69E		1527	USSR	25 AUG	
1965 71A	COSMOS 85	1528	USSR	9 SEP	
1965 71B		1579	USSR	9 SEP	
٠.		1602	ns	22 SEP	
1965 75A	COSMOS 91	1603	USSR		
'n		1604	USSR	23 SEP	
S		1505	USSR	23 SEP	
1965 75D		1606	USSR	23 SEP	
S		1607	USSR	23 SEP	
65		1609	ns	30 SEP	5 OCT 65
1965 76B		1614	Sn	30 SEP	3 OCT 65

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DECAY		13 DEC 65	NOV 6				NOV		NOV	NOV	NOV		NOV		NOV	NOV	NOV	NOV	NOV	26 NOV 65	NOV	NOV	NOV	NOV		1 MAR 66****	26 NOV 65	3 DEC 65	16 NOV 65		4 DEC 65
LAUNCH		VON 4	4 NOV		4 NOV	4 NOV	4 NOV		4 NOV	4 NOV		4 NOV	4 NOV	4 NOV	VOV 4	4 NOV	4 NOV	4 NOV	4 NOV	4 NOV	4 NOV		NOV 8		12 NOV	16 NOV	16 NOV	16 NOV	16 NOV	23 NOV	23 NOV
SOURCE		USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	Sn	SN	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR
CATALOGUE		1741	1784	1785	1786	1787	1788	1789	1790	1791	1792	1793	1794	1795	1796	1797	1798	1799	1800	1801	1802	1727	1728	1731	1732	1733	1734	1735	1737	1742	1743
CODE NAME	(CONT'D)																									VENERA 3				COSMOS 96	
OBJECT	1965 LAUNCHES (CONT'D)		1965 88F			1965 88J											1965 88V			1965 88Y						965	965	1965 92C	'n	9	1965 94B

DECAY		28 NOV 65	NOV		NOV	8 DEC 65		21 JAN 66		5 DEC 65	23 JAN 66		6 DEC 65****	DEC	DEC	DEC		JAN	DEC	15 DEC 65	DEC	DEC	DEC	DEC	20 JAN 66	6 JAN 66	13 JAN 66		15 JAN 66	
LAUNCH		23 NOV	23 NOV	23 NOV								27 NOV			3 DEC			4 DEC	9 DEC	9 DEC					24 DEC	24 DEC	•		7 JAN	
SOURCE		USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	USSR	SD	NS	SD	ns	SO	USSR	USSR	Sn	Sn	Sn	Sn	USSR		USSR	
CATALOGUE	·	1771	1772	1773	1774	1775	1776	1782	1783	1780	1781	1803	1810	1809	1311	1812	. 1813	1845	1816	1838	1817	1818	1839	1840	1866	1901	1867		1903	
CODE NAME	CONT'D)									COSMOS 98			LUNA 8			GT-7					COSMOS 99		GT-6				COSMOS 102		COSMOS 104	
OBJECT	1965 LAUNCHES (CONT'D)	1965 94C	1965 94D	1965 94E	1965 94F	1.965 94G	1.965 94H	1965 95C	1.965 95D	1965 97A	1.965 97B	1965 97C	1965 99A		1965 99C		1965 100B	1965 100C	1965 102A	1965 102B	1965 103A	1965 103B	1965 104A	1965 104B	1.965 110A	1965 110B	1965 111A	1966 LAUNCHES	1.966 01A	

1966 LAUNCHES (CONT'D)) 2036 US 15 FEB 18 FEB 1966 12R 2037 US 15 FEB 20 FEB 1966 12R 2038 US 15 FEB 19 FEB 1966 12R 2039 US 15 FEB 19 FEB 1966 12R 2039 US 15 FEB 19 FEB 1966 12V 2040 US 15 FEB 20 FEB 1966 12V 2057 US 15 FEB 20 FEB 1966 12X 2058 US 15 FEB 20 FEB 1966 12X 2059 US 15 FEB 20 FEB 1966 12X 2059 US 15 FEB 20 FEB 1966 12X 2050 US 15 FEB 17 FEB 1966 12AA 2060 US 15 FEB 17 FEB 1966 12AB 2064 US 15 FEB 17 FEB 1966 12AB 2064 US 15 FEB 17 FEB 1966 12AB 2064 US 15 FEB 18 FEB	OBJECT	CODE NAME	CATALOGUE NUMBER	SOURCE	LAUNCH	DECAY
12Q 2036 US 15 FEB 1 12S 2037 US 15 FEB 20 12S 2038 US 15 FEB 19 12U 2040 US 15 FEB 18 12U 2040 US 15 FEB 20 12V 2056 US 15 FEB 20 12X 2057 US 15 FEB 20 12X 2059 US 15 FEB 18 12X 2059 US 15 FEB 19 12X 2059 US 15 FEB 19 12X 2050 US 15 FEB 17 12X 2060 US 15 FEB 17 12AB 2061 US 15 FEB 17 12AF 2065 US 15 FEB 17 12AB 2067 US 15 FEB 17 12AB 2074 US 15 FEB 17 12AB	1966 LAUNCHES	(CONT'D)				
12R 2037 US 15 FEB 20 12S 2038 US 15 FEB 19 12T 2039 US 15 FEB 19 12U 2040 US 15 FEB 20 12V 2056 US 15 FEB 20 12X 2059 US 15 FEB 21 12X 2059 US 15 FEB 18 12X 2059 US 15 FEB 19 12X 2060 US 15 FEB 19 12X 2061 US 15 FEB 19 12X 2061 US 15 FEB 19 12X 2063 US 15 FEB 19 12AB 2064 US 15 FEB 17 12AB 2065 US 15 FEB 17 12AB 2064 US 15 FEB 17 12AB 2074 US 15 FEB 17 12A			2036	Sn	15 FEB	18 FEB 66
12S 2038 US 15 FEB 19 12T 2039 US 15 FEB 16 12V 2040 US 15 FEB 18 12V 2056 US 15 FEB 20 12V 2057 US 15 FEB 21 12X 2058 US 15 FEB 21 12X 2059 US 15 FEB 19 12X 2060 US 15 FEB 19 12X 2061 US 15 FEB 17 12AB 2063 US 15 FEB 17 12AC 2064 US 15 FEB 17 12AB 2064 US 15 FEB 17 12AB 2064 US 15 FEB 17 12AB 2069 US 15 FEB 17 12AB 2074 US 15 FEB 17 12AB 2074 US 15 FEB 17			2037	Sn	15 FEB	20 FEB 66
12T 2039 US 15 FEB 16 12U 2040 US 15 FEB 18 12V 2056 US 15 FEB 20 12W 2057 US 15 FEB 21 12X 2059 US 15 FEB 18 12X 2050 US 15 FEB 18 12X 2060 US 15 FEB 19 12X 2060 US 15 FEB 17 12AB 2064 US 15 FEB 17 12AB 2064 US 15 FEB 17 12AB 2064 US 15 FEB 17 12AB 2065 US 15 FEB 17 12AB 2066 US 15 FEB 17 12AB 2072 US 15 FEB 17 12AB 2074 US 15 FEB 17 12AB 2075 US 15 FEB 17 <td< td=""><td>-</td><td></td><td>2038</td><td>Sn</td><td>15 FEB</td><td>FEB</td></td<>	-		2038	Sn	15 FEB	FEB
120 2040 US 15 FEB 18 12V 2056 US 15 FEB 20 12V 2057 US 15 FEB 20 12X 2059 US 15 FEB 18 12X 2060 US 15 FEB 18 12X 2060 US 15 FEB 19 12XB 2061 US 15 FEB 19 12AB 2062 US 15 FEB 17 12AB 2064 US 15 FEB 17 12AB 2064 US 15 FEB 17 12AB 2065 US 15 FEB 17 12AB 2066 US 15 FEB 17 12AB 2069 US 15 FEB 17 12AB 2073 US 15 FEB 17 12AB 2075 US 15 FEB 19 12AB 2076 US 15 FEB 19 <			2039	ns	15 FEB	FEB
12V 2056 US 15 FEB 20 12W 2057 US 15 FEB 21 12X 2058 US 15 FEB 18 12X 2069 US 15 FEB 18 12X 2060 US 15 FEB 19 12X 2061 US 15 FEB 19 12AB 2062 US 15 FEB 17 12AB 2064 US 15 FEB 17 12AB 2064 US 15 FEB 17 12AB 2064 US 15 FEB 17 12AB 2065 US 15 FEB 17 12AB 2066 US 15 FEB 17 12AB 2072 US 15 FEB 17 12AB 2074 US 15 FEB 17 12AB 2075 US 15 FEB 18 12AB 2075 US 15 FEB 18 <	_		2040	ns	15 FEB	18 FEB 66
12M 2057 US 15 FEB 21 12X 2058 US 15 FEB 18 12X 2059 US 15 FEB 18 12X 2060 US 15 FEB 18 12X 2061 US 15 FEB 19 12AA 2062 US 15 FEB 17 12AD 2064 US 15 FEB 17 12AE 2064 US 15 FEB 17 12AE 2065 US 15 FEB 17 12AB 2066 US 15 FEB 17 12AH 2069 US 15 FEB 17 12AH 2072 US 15 FEB 17 12AM 2074 US 15 FEB 18 12AB 2074 US 15 FEB 18 12AB 2074 US 15 FEB 19 12AB 2078 US 15 FEB 19	_		2056	ns	15 FEB	20 FEB 66
12X 2058 US 15 FEB 18 12Y 2059 US 15 FEB 18 12A 2060 US 15 FEB 18 12AA 2061 US 15 FEB 19 12AB 2062 US 15 FEB 27 12AB 2063 US 15 FEB 17 12AB 2065 US 15 FEB 19 12AB 2065 US 15 FEB 17 12AB 2067 US 15 FEB 17 12AH 2068 US 15 FEB 17 12AB 2074 US 15 FEB 17 12AB 2074 US 15 FEB 17 12AB 2074 US 15 FEB 18 12AB 2074 US 15 FEB 18 12AB 2076 US 15 FEB 19 12AB 2076 US 15 FEB 19	-		2057	ΩS	15 FEB	
12X 2059 US 15 FEB 18 12A 2060 US 15 FEB 18 12AB 2061 US 15 FEB 19 12AB 2063 US 15 FEB 17 12AB 2064 US 15 FEB 17 12AB 2065 US 15 FEB 19 12AB 2065 US 15 FEB 17 12AB 2067 US 15 FEB 17 12AB 2069 US 15 FEB 17 12AB 2072 US 15 FEB 17 12AB 2073 US 15 FEB 17 12AB 2074 US 15 FEB 17 12AB 2074 US 15 FEB 18 12AB 2075 US 15 FEB 19 12AB 2076 US 15 FEB 19 12AB 2078 US 15 FEB 19	_		2058	Sn	_	
12Z 2060 US 15 FEB 18 12AA 2061 US 15 FEB 19 12AB 2063 US 15 FEB 19 12AD 2064 US 15 FEB 17 12AB 2065 US 15 FEB 19 12AB 2065 US 15 FEB 17 12AB 2067 US 15 FEB 17 12AB 2069 US 15 FEB 17 12AB 2072 US 15 FEB 17 12AB 2073 US 15 FEB 17 12AB 2074 US 15 FEB 17 12AB 2075 US 15 FEB 17 12AB 2074 US 15 FEB 18 12AB 2075 US 15 FEB 19 12AB 2076 US 15 FEB 19 12AB 2078 US 15 FEB 19	_		2059	Sn	_	
12AA 2061 US 15 FEB 19 12AB 2062 US 15 FEB 22 12AC US 15 FEB 17 12AD 2064 US 15 FEB 17 12AE 2065 US 15 FEB 19 12AF 2066 US 15 FEB 17 12AB 2067 US 15 FEB 17 12AJ 2068 US 15 FEB 17 12AJ 2069 US 15 FEB 18 12AM 2072 US 15 FEB 17 12AN 2074 US 15 FEB 19 12AN 2075 US 15 FEB 19 12AP 2076 US 15 FEB 19 12AR 2076 US 15 FEB 19 12AR 2078 USSR 15 FEB 27 14B COSMOS 109 2019 USSR 15 FEB 27	_		2060	SO		
12AB 2062 US 15 FEB 22 12AC 2063 US 15 FEB 17 112AD 2064 US 15 FEB 17 112AE 2065 US 15 FEB 19 112AF 2066 US 15 FEB 19 12AB 2067 US 15 FEB 17 12AB 2069 US 15 FEB 17 12AB 2072 US 15 FEB 18 12AB 2074 US 15 FEB 18 12AB 2074 US 15 FEB 19 12AB 2074 US 15 FEB 19 12AB 2074 US 15 FEB 19 12AB 2075 US 15 FEB 19 12AB 2076 US 15 FEB 19 12AB 2077 US 15 FEB 19 14A COSMOS 109 2019 USSR 19 FEB <t< td=""><td>•</td><td></td><td>2061</td><td>US</td><td></td><td></td></t<>	•		2061	US		
12AC 2063 US 15 FEB 17 12AD 2064 US 15 FEB 22 12AE 2065 US 15 FEB 19 12AF 2066 US 15 FEB 17 12AG US 15 FEB 17 12AJ 2069 US 15 FEB 17 12AL 2072 US 15 FEB 17 12AL 2073 US 15 FEB 17 12AL 2074 US 15 FEB 17 12AN 2074 US 15 FEB 19 12AN 2075 US 15 FEB 19 12AP 2076 US 15 FEB 19 12AP 2076 US 15 FEB 19 12AP 2077 US 15 FEB 19 12AP 2078 USSR 15 FEB 27 14A COSMOS 109 2019 USSR 19 FEB 27	-		2062	SO .		
12AD 2064 US 15 FEB 22 12AE 2065 US 15 FEB 19 12AF 2066 US 15 FEB 19 12AG US 15 FEB 17 12AJ 2069 US 15 FEB 17 12AL 2072 US 15 FEB 17 12AL 2073 US 15 FEB 17 12AN 2074 US 15 FEB 17 12AN 2075 US 15 FEB 19 12AP US US 15 FEB 19 12AP US <td>•</td> <td></td> <td>2063</td> <td>Sn</td> <td></td> <td></td>	•		2063	Sn		
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12AF 2066 US 15 FEB 19 12AG US 15 FEB 17 12AJ US 15 FEB 17 12AJ 2069 US 15 FEB 17 12AJ 2072 US 15 FEB 18 12AL 2073 US 15 FEB 17 12AN 2074 US 15 FEB 19 12AP 2075 US 15 FEB 19 12AQ US US 15 FEB 19 12AQ US US 15 FEB 19 12AR USSR 15 FEB 19 19 14A COSMOS 109 2019 USSR 19 FEB 27 14B USSR 19 FEB 27			2065	Sn		FEB
12AG 2067 US 15 FEB 17 12AH 2068 US 15 FEB 17 12AJ 2069 US 15 FEB 17 12AL 2072 US 15 FEB 18 12AL 2073 US 15 FEB 17 12AM 2074 US 15 FEB 17 12AN 2075 US 15 FEB 19 12AP US US 15 FEB 19 12AQ US US 15 FEB 19 12AQ USSR 15 FEB 19 14A COSMOS 109 2019 USSR 19 FEB 27 14B COSMOS 109 USSR 19 FEB 27			2066	Sn		FEB
12AH 2068 US 15 FEB 17 12AJ 2069 US 15 FEB 20 12AL US US 15 FEB 18 12AL 2073 US 15 FEB 17 12AN 2075 US 15 FEB 17 12AP US US 15 FEB 19 12AP US US 15 FEB 19 12AR 2077 US US 15 FEB 19 14A COSMOS 109 2019 USSR 19 FEB 27 14B COSMOS 109 2019 USSR 19 FEB 27			2067	US	_	FEB
12AJ 2069 US 15 FEB 20 12AK 2072 US 15 FEB 18 12AL 2073 US 15 FEB 17 12AN 2074 US 15 FEB 17 12AP US US 15 FEB 19 12AP US US 15 FEB 19 12AP US US 15 FEB 19 12AR USSR USSR 19 FEB 27 14B COSMOS 109 2019 USSR 19 FEB 27 14B USSR 19 FEB 27			2068	US		
12AK 2072 US 15 FEB 18 12AL 2073 US 15 FEB 17 12AN US US 15 FEB 18 12AN 2075 US 15 FEB 19 12AP US US 15 FEB 19 12AR 2077 US US 15 FEB 19 14A COSMOS 109 2019 USSR 19 FEB 27 14B 2022 USSR 19 FEB 27			2069	ns		
12AL 2073 US 15 FEB 17 12AM 2074 US 15 FEB 18 12AN 2075 US 15 FEB 17 12AP 2076 US 15 FEB 19 12AQ US 15 FEB 18 12AR 2077 US 15 FEB 19 14A COSMOS 109 2019 USSR 19 FEB 27 14B 2022 USSR 19 FEB 27			2072	US		FEB
12AM 2074 US 15 FEB 18 12AN 2075 US 15 FEB 17 12AQ US 15 FEB 19 12AQ US 15 FEB 18 12AQ US 15 FEB 18 12AR US 15 FEB 19 14A COSMOS 109 2019 USSR 19 FEB 27 14B COSMOS 109 2022 USSR 19 FEB 27			2073	SD		
12AN 2075 US 15 FEB 17 12AP 2076 US 15 FEB 19 12AQ 2077 US 15 FEB 18 12AR 2078 US 15 FEB 19 14A COSMOS 109 2019 USSR 19 FEB 27 14B 2022 USSR 19 FEB 27			2074	SO		
12AP 2076 US 15 FEB 19 12AQ 2077 US 15 FEB 18 12AR 2078 US 15 FEB 19 14A COSMOS 109 2019 USSR 19 FEB 27 14B 2022 USSR 19 FEB 27			2075	US		FEB
12AQ 2077 US 15 FEB 18 12AR 2078 US 15 FEB 19 14A COSMOS 109 2019 USSR 19 FEB 27 14B 2022 USSR 19 FEB 27			2076	ns		
12AR 2078 US 15 FEB 19 14A COSMOS 109 2019 USSR 19 FEB 27 14B 2022 USSR 19 FEB 27			2077	US		
14A COSMOS 109 2019 USSR 19 FEB 27 14B 2022 USSR 19 FEB 27			2078	Sn	15 FEB	19 FEB 66
66 14B 2022 USSR 19 FEB 27	-	-	2019	USSR	19 FEB	27 FEB 66
	66 1		2022	USSR	19 FEB	27 FEB 66

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DECAY		21 FEB 66	16 MAR 66*	5 MAR 66	5 MAR 66	3 MAR 66	1 MAR 66	MAR	29 MAR 66	MAR	17 MAR 66 7	17 MAR 66	MAR	MAR	MAR	MAR	MAR	29 MAR 66		22 MAR 66
LAUNCH		19 FEB	22 FEB	22 FEB	22 FEB	1 MAR	1 MAR	1 MAR	9 MAR	9 MAR	16 MAR	16 MAR	17 MAR	17 MAR			18 MAR		21 MAR	21 MAR
SOURCE		USSR	USSR	USSR	USSR	USSR	USSR	USSR	US	nS	ns	nS	USSR	USSR	USSR	ns	Sn	USSR	USSR	USSR
CATALOGUE		2024	2070	2089	2090	2093	2094	2095	2099	2113	2105	2106	2107	2110	2111	2109	2112	2114	2116	2117
CODE NAME	(CONT'D)		COSMOS 110) 		COSMOS 111					GT-8) ;	COSMOS 112					COSMOS 113		
OBJECT	1966 LAUNCHES (CONT'D)	1966 140	•		1966 15D							1966 20R								

AND RECOVERY
AND
RE-ENTRY
SUCCESSFUL
ANNOUNCED
USSR
*

SUCCESSFUL RE-ENTRY AND RECOVERY ***

SUCCESSFUL RE-ENTRY, BUT NOT RECOVERY
USSR ANNOUNCED SUCCESSFUL RE-ENTRY AND RECOVERY OF MANNED SPACE VEHICLE HIT MOON **** ****

US SUCCESSFULLY ORBITED AND RECOVERED A MANNED SPACE VEHICLE USSR ANNOUNCED DECAY OF SPACE PROBE PAYLOAD ON THE SURFACE OF VENUS ***** ******